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LELAND STANFORD JUNIOR UNIVERSITY

SIXTEENTH

ANNUAL REGISTER

1906-07

"The beneficence of the Creator towards man on earth, and the possibilities of humanity, are one and the same." — LELAND STANFORD.

"A generous education is the birthright of every man and woman in America."

STANFORD UNIVERSITY, CALIFORNIA
PUBLISHED BY THE UNIVERSITY
APRIL, 1907

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PALO ALTO, CALIFORNIA

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OFFICE DIRECTORY*

The office of the PRESIDENT is room 112.

The office of the REGISTRAR is room 116.

The office of the SECRETARY to the President is room 110.

The office of the TREASURER is room 250.

The office of the ASSOCIATE PROFESSOR OF HYGIENE is room 95.

The various Departmental offices are given in the SCHEDULE and in the DIRECTORY OF OFFICERS AND STUDENTS.

The University Post, Telegraph, and Telephone Office is *Stanford University, California.*

The University Railway Station and Express Office is *Palo Alto, California.*

Requests for *Registers*, blanks, and other printed matter, and inquiries regarding terms of admission, advanced standing, etc., should be addressed to *The Registrar, Stanford University, Cal.*

[*The rooms in the Inner Quadrangle are numbered consecutively, beginning at the left of the main entrance, ten numbers being allotted to each building. In the Outer Quadrangle forty numbers are allotted to each of the large buildings and ten numbers to each one-story building, beginning with the Assembly Hall and number 120. The engineering buildings south of the Quadrangles begin with number 500. The Chemistry building is on the west avenue between the Quadrangles and the Museum.]

UNIVERSITY CALENDAR

1906			
Aug.	23	Thursday	Entrance Examinations begin.
Aug.	28	Tuesday	Registration of Matriculated Students
Aug.	29	Wednesday	Registration of New Students.
Aug.	30	Thursday	Instruction begins.
Sept.	7	Friday	Conferring of Degrees.
Nov.	29	Thursday	Thanksgiving Recess.
Dec.	2	Sunday	
Dec.	19	Wednesday	First Semester ends.
1907			
Jan.	4	Friday	Entrance Examinations begin.
Jan.	8	Tuesday	Registration for Second Semester.
Jan.	9	Wednesday	Instruction begins.
Jan.	11	Friday	Mid-Year Conferring of Degrees.
Feb.	22	Friday	Washington's Birthday.
Mar.	9	Monday	Founder's Day.
Mar.	30	Saturday	Mid-Semester Recess.
April	7	Sunday	
May	14	Tuesday	Memorial Day.
May	9-16	Thur.-Thur.	End-Semester Examinations.
May	18	Saturday	Entrance Examination in English.
May	19	Sunday	Baccalaureate Sunday.
May	20	Monday	Class Day.
May	21	Tuesday	Alumni Day.
May	22	Wednesday	Commencement.

Aug.	22	Thursday	Entrance Examinations begin.
Aug.	27	Tuesday	Registration of Matriculated Students.
Aug.	28	Wednesday	Registration of New Students.
Aug.	29	Thursday	Instruction begins.
Sept.	6	Friday	Conferring of Degrees.
Nov.	28	Thursday	Thanksgiving Recess.
Dec.	1	Sunday	
Dec.	14-20	Sat.-Fri.	End-Semester Examinations.
1908			
Jan.	3	Friday	Entrance Examinations begin.
Jan.	7	Tuesday	Registration for Second Semester.
Mar.	29	Saturday	Mid-Semester Recess begins.
May	21	Wednesday	Commencement.

ADMINISTRATIVE OFFICERS

BOARD OF TRUSTEES

HORACE DAVIS, A. M., President,
133 Spear St., San Francisco
TIMOTHY HOPKINS, Vice-President, Menlo Park
SAMUEL FRANKLIN LEIB, A. B.,
Farmers' Union Building, San Jose
CHARLES GARDNER LATHROP, Treasurer,
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and Assistant Treasurer, 2414 Fillmore St., San Francisco
THOMAS BARD McFARLAND, A. B.,
1738 Washington St., San Francisco
GEORGE EDWARD GRAY,
U. S. Naval Hospital, Mare Island
JOSEPH DONOHOE GRANT, A. B.,
2200 Broadway, San Francisco
LEON SLOSS, 1516 Van Ness Ave., San Francisco
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WHITELAW REID, A. M., LL. D., London, England
WILLIAM BABCOCK, San Rafael
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VANDERLYN STOW, A. B.,
Cor. Baker St. and Broadway, San Francisco

STANDING COMMITTEES OF THE TRUSTEES

Finance: Sloss, Lathrop, Leib, Babcock, Crothers, Miller, Stow.

University: Eells, Leib, Grant, McFarland, Hopkins, Sloss, Crothers.

Library: McFarland, Hopkins, Eells, Stanford, Crothers, Reid.

Organization: Grant, Crothers, McFarland, Miller, Leib, Sloss, Babcock.

Museum: Hopkins, Babcock, Lathrop, Miller, Gray, Stanford, Grant.

Memorial Church: Lathrop, Reid, Gray, Eells.

THE UNIVERSITY

President: David Starr Jordan.
Vice-President: John Casper Branner.
Registrar: Orrin Leslie Elliott.
Associate Librarian: Melvin Gilbert Dodge.
Secretary to the President: George Archibald Clark.

EXECUTIVE HEADS OF DEPARTMENTS

Greek: Augustus Taber Murray.
Latin: Henry Rushton Fairclough.
Germanic Languages: George Hempl.
Romanic Languages: John Ernst Matzke.
English Philology: Edward Flügel.
English Literature and Rhetoric: Alphonso Gerald Newcomer.
Philosophy: Frank Angell (acting).
Psychology: Frank Angell.
Education: Ellwood P. Cubberley.
History: Max Farrand.
Economics and Social Science: Allyn Albert Young (acting).
Law: Charles Henry Huberich (acting).
Drawing: Arthur Bridgman Clark (acting).
Mathematics: Robert Edgar Allardice.
Applied Mathematics: Leander Miller Hoskins.
Physics: Fernando Sanford.
Chemistry: John Maxson Stillman.
Botany: Douglas Houghton Campbell.
Systematic Botany and Forestry: LeRoy Abrams (acting).
Physiology and Histology: Oliver Peebles Jenkins.
Hygiene: William Freeman Snow (acting).
Zoology: Charles Henry Gilbert.
Entomology and Bionomics: Vernon Lyman Kellogg.
Geology and Mining: John Casper Branner.
Civil Engineering: Charles David Marx.
Mechanical Engineering: William Frederick Durand.
Electrical Engineering: Harris Joseph Ryan.

STANDING COMMITTEES OF THE ACADEMIC COUNCIL

Advisory Board

ANGELL, BRANNER, HOSKINS, KELLOGG, C. D. MARX, MURRAY, SANFORD, SHOW, STILLMAN.

Administrative Committees

1. **Student Affairs**: DURAND, ADAMS, KELLOGG, NEWCOMER, FOSTER.
2. **Athletics**: ANGELL, WING, DURAND, SNOW, SEARLES.
3. **Public Exercises**: DUNIWAY, FARRAND, NEWCOMER, ROLFE, SUZZALLO.
4. **Literary Contests**: DUNIWAY, ALDEN, ELMORE, BASSETT.
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Academic Committees

1. **Executive Committee**: JORDAN, BRANNER, ELLIOTT, ADAMS, CLARK, FAIRCLOUGH, FARRAND, FRANKLIN, GILBERT, GREEN, G. H. MARX, PEIRCE, ROLFE.
2. **Admission and Advanced Standing**: ELLIOTT, SHOW, MATZKE, RYAN, CUBBERLEY.
3. **Registration**: ELLIOTT, SNOW, COOPER, SUZZALLO, MORENO.
4. **Graduation**: ELLIOTT, JENKINS, FARRAND, JOHNSTON, RENDTORFF.
5. **Schedule and Examinations**: ELLIOTT, McFARLAND, ELMORE, ROLFE, HUBERICH.
6. **Graduate Study**: MURRAY, CAMPBELL, ANGELL, HOSKINS, MATZKE.
7. **Library**: STILLMAN, C. D. MARX, KELLOGG, FAIRCLOUGH, ADAMS.
8. **University Publications**: FAIRCLOUGH, DUNIWAY, SMITH, G. H. MARX, MILLIS.
9. **Recommendation of Teachers**: ELLIOTT, CUBBERLEY, FAIRCLOUGH, SANFORD, SHOW.

FACULTY AND OTHER OFFICERS[*]

DAVID STARR JORDAN, President of the University. Xazmin House, Serra Ave.

M. S., Cornell University, 1872; M. D., Indiana Medical College, 1875; Ph. D., Butler University, 1878; LL. D., Cornell University, 1886, Johns Hopkins University, 1902. Instructor in Botany, Cornell University, 1871-72; Professor of Natural History, Lombard University, 1872-73; Principal of Appleton (Wis.) Collegiate Institute, 1873-74; Student and afterward Lecturer in Marine Botany, Anderson School at Penikese, 1874; Teacher of Natural History, Indianapolis High School, 1874-75; Professor of Biology, Butler University, 1875-79; Assistant to the U. S. Fish Commission, 1877-91; Professor of Zoology, Indiana University, 1879-85; President of Indiana University, 1885-91; President of the California Academy of Sciences, 1896-98, 1901-03; U. S. Commissioner in charge of Fur Seal Investigations, 1896-98, of Salmon Investigations, 1904.

JOHN CASPER BRANNER, Vice-President and Professor of Geology. 13 Alvarado Row.

B. S., Cornell University, 1882; Ph. D., Indiana University, 1885; LL. D., University of Arkansas, 1897. Assistant Geologist, Imperial Geological Survey of Brazil, 1875-78; Special Botanist in South America, 1880-81; Special Agent of the U. S. Department of Agriculture for Investigating Cotton and the Insects affecting it in Brazil, 1882-83; Topographical Geologist of the Geological Survey of Pennsylvania, Anthracite District, 1883-85; Professor of Geology, Indiana University, 1885-91; State Geologist of Arkansas, 1887-92.

OLIVER PEEBLES JENKINS, Professor of Physiology and Histology. 3 Lasuen St.

A. B., Moore's Hill College, 1869, A. M., 1872; M. S., Indiana University, 1886, Ph. D., 1889. Professor of Natural Science, Moore's Hill College, 1876-82; Professor of Natural Science, Indiana State Normal School, 1883-86; Professor of Biology, De Pauw University, 1886-91.

†MELVILLE BEST ANDERSON, Professor of English Literature. [In Europe.]

A. M., Butler University, 1877; LL. D., University of Aberdeen, 1906; Professor of Modern Languages, Butler University, 1877-80; Professor of English Literature, Knox College, 1881-86; Professor of Literature and History, Purdue University, 1886-87; Professor of the English Language and Literature, University of Iowa, 1887-91.

JOHN MAXSON STILLMAN, Professor of Chemistry. 2 Alvarado Row.

Ph. B., University of California, 1874, Ph. D., 1885. Assistant in Chemistry, University of California, 1873-75; Student in Chemistry, Strassburg and Würzburg, 1875-76; Instructor in Organic and General Chemistry, University of California, 1876-82; Chemist of the Boston and American Sugar Refining Company, 1882-92.

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[*] Arranged in groups in the order of seniority of appointment. For Alphabetical Directory of Officers, see p. 236.

†Absent on leave, 1906-07.

FERNANDO SANFORD, Professor of Physics.
450 Kingsley Ave.

B. S., Carthage College, 1879, M. S., 1882. Student, University of Berlin, 1886-88; Professor of Physical Science, Mt. Morris College, 1879-82; Superintendent of Schools, Ogle County, Ill., 1882-86; Instructor in Physics and Chemistry, Englewood (Ill.) High School, 1888-90; Professor of Physical Science, Lake Forest University, 1890-91.

CHARLES DAVID MARX, Professor of Civil Engineering.
357 Kingsley Ave.

B. C. E., Cornell University, 1878; C. E., Karlsruhe Polytechnicum, 1881. Instructor in Civil Engineering, Karlsruhe Polytechnicum, 1880-81; U S. Assistant Engineer, Missouri River Improvement, 1882-84; Assistant Professor of Civil Engineering, Cornell University, 1884-90; Professor of Civil Engineering, University of Wisconsin, 1890-91.

CHARLES HENRY GILBERT, Professor of Zoology.
433 Melville Ave.

B. S., Butler University 1879; M. S., Indiana University, 1882, Ph. D., 1883, Assistant in Natural Sciences and Modern Languages, Indiana University, 1880-84; Professor of Natural History, University of Cincinnati, 1884-88; Professor of Zoology, Indiana University, 1888-91; Assistant to the U. S. Fish Commission, 1880-91.

DOUGLAS HOUGHTON CAMPBELL, Professor of Botany.
19 Salvatierra St.

Ph. M., University of Michigan, 1882, Ph. D., 1886. Teacher of Biology, Detroit High School, 1882-86; Student at Bonn, Tübingen, and Berlin, 1886-88; Professor of Botany, Indiana University, 1888-91.

†EWALD FLÜGEL, Professor of English Philology.
[In Europe.]

Ph. D., University of Leipzig, 1886. Student, Universities of Freiburg and Leipzig, 1882-88; Privat Docent, University of Leipzig, 1888-92.

CHARLES BENJAMIN WING, Professor of Structural Engineering.
345 Lincoln Ave.

C. E., Cornell University, 1886. Fellow in Civil Engineering, Cornell University, 1886-87, Instructor, 1887-90, Assistant Professor, 1890-91; Engineer, Pompton (N. J.) Powder Co., 1887, Phœnix Powder Co., Farmingdale, N. Y., 1888; Assistant Engineer, Berlin (Conn.) Iron Bridge Co., 1889-90; Professor of Bridge and Hydraulic Engineering, University of Wisconsin, 1891-92.

FRANK ANGELL, Professor of Psychology.
1200 Bryant St.

B. S., University of Vermont, 1878; Ph. D., University of Leipzig, 1891; L. H. D., University of Vermont, 1892. Teacher in Washington (D. C.) High School, 1880-87; Assistant Professor of Psychology, Cornell University, 1891-92.

LEANDER MILLER HOSKINS, Professor of Applied Mathematics.
365 Lincoln Ave.

B. C. E. and B. S., University of Wisconsin, 1883, M. S., 1885, C. E., 1887. Instructor in Engineering, University of Wisconsin, 1885-89, Assistant Professor of Mechanics, 1889-91, Professor of Theoretical and Applied Mechanics, 1891-92.

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†Absent on leave, 1906-07.

ROBERT EDGAR ALLARDICE, Professor of Mathematics. 19 Salvatierra St.

A. M., University of Edinburgh, 1882. Baxter Scholar in Mathematics, University of Edinburgh, 1882-83, Drummond Scholar in Mathematics, 1883-84; Assistant Professor of Mathematics, University of Edinburgh, 1883-92.

†WILLIAM RUSSELL DUDLEY, Professor of Botany. [In Europe.]

B. S., Cornell University, 1874, M. S., 1876. Student, Summer School, Penikese, 1874, Harvard University, 1876, Universities of Strassburg and Berlin, 1887-88; Instructor in Botany, Cornell University, 1872-76, Assistant Professor, 1876-92.

AUGUSTUS TABER MURRAY, Professor of Greek. 1019 Bryant St.

A. B., Haverford College, 1885; Ph. D., John Hopkins University, 1890. Fellow in Johns Hopkins University, 1887-88; Professor of Greek, Earlham College, 1888-90; Student, Universities of Leipzig and Berlin, 1890-91; Professor of Greek, Colorado College, 1891-92.

‡NATHAN ABBOTT, Professor of Law. [New York City.]

A. B., Yale University, 1877; LL. B., Boston University, 1893. Professor of Law, University of Michigan, 1891-92; Professor of Law, Northwestern University, 1892-94.

JOHN ERNST MATZKE, Professor of Romanic Languages. 1211 Bryant St.

A. B., Hope College, 1882; Ph. D., Johns Hopkins University, 1888. Professor of French, Bowdoin College, 1889-90; Professor of the Romanic Languages, Indiana University, 1890-91; Associate in the Romanic Languages, Johns Hopkins University, 1891-93.

JAMES OWEN GRIFFIN, Professor of German. 14 Alvarado Row.

Graduate of the Pennsylvania State Normal School, 1873. Teacher in Pennsylvania State Normal School, 1873-74; Principal, Unadilla (N. Y.) Academy, 1874-79; Student, University of Göttingen, 1879-80; Principal of Delaware Academy (Delhi, N. Y.). 1880-85; Instructor in German, Cornell University, 1885-91, Registrar, 1890-91.

RUFUS LOT GREEN, Professor of Mathematics. 13 Salvatierra St.

B. S., Indiana University, 1885, A. M., 1890. Instructor in Mathematics, Indiana University, 1885-86; Student, Johns Hopkins University, 1886-87; Professor of Pure Mathematics, Indiana University, 1887-93.

ARLEY BARTHLOW SHOW, Professor of Mediaeval History. 353 Melville Ave.

A. B., Doane College, 1882; Graduate, Andover Theological Seminary, 1885; A. M., Doane College, 1892. Pastor, Congregational Church, Waco, Neb., 1885-87; Professor of History and English Literature, Doane College, 1887-92; Student, University of Leipzig, 1900-01; Lecturer on History of the Early Church, Pacific Theological Seminary, Oakland, 1905-07.

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†Absent on leave, 1906-07.

‡Absent on leave, 1906-07. Resigned February, 1907.

ORRIN LESLIE ELLIOTT, Registrar.
12 Alvarado Row.

Ph. B., Cornell University, 1885, Ph. D., 1890. Fellow in History and Political Science, Cornell University, 1885-86, Instructor in English, 1886-91, Assistant Registrar and President's Secretary, 1890-91.

VERNON LYMAN KELLOGG, Professor of Entomology and Lecturer in Bionomics. 19 Salvatierra St.

B. S., University of Kansas, 1889, M. S., 1892. Student, Cornell University, 1891, University of Leipzig, 1893; Assistant Professor of Entomology, University of Kansas, 1890-93, Associate Professor, 1893-94.

JAMES PERRIN SMITH, Professor of Paleontology.
1335 Cowper St.

A. M., Vanderbilt University, 1886; Ph. D., University of Göttingen, 1892. Assistant Geologist and Chemist, Arkansas Geological Survey, 1887-90.

LIONEL REMOND LENOX, Professor of Analytical Chemistry. Mountain View.

Ph. B., Columbia College, 1888. Assistant Chemist, Bethlehem Iron Co., 1887; Instructor in Chemistry, Lehigh University, 1888-91; Chemist, Ordnance Department, U. S. N., Washington, D. C., 1891-92.

HENRY RUSHTON FAIRCLOUGH, Professor of Latin.
6 Alvarado Row.

A. B., University of Toronto, 1883, A. M., 1886; Ph. D., Johns Hopkins University, 1896. Fellow in Classics, University College, Toronto, 1883-84; Classical and English Master, Brockville High School, 1884-86; Graduate Scholar, Johns Hopkins University, 1886-87, Fellow, 1887; Lecturer in Greek and Ancient History, University College, Toronto, 1887-93.

MAX FARRAND, Professor of History.
19 Salvatierra St.

A. B., Princeton University, 1892, A. M., 1893, Ph. D., 1896. Boudinot Fellow in History, Princeton University, 1892-93, Fellow in Social Science, 1893-94; Student, Universities of Leipzig and Heidelberg, 1894-96; Instructor in History, Wesleyan University, 1896-98, Associate Professor, 1898-99, Professor, 1899-1901.

WILLIAM FREDERICK DURAND, Professor of Mechanical Engineering. 2 San Juan St.

Graduate U. S. Naval Academy, 1880; Ph. D., Lafayette College, 1888. Engineer Corps, U. S. Navy, 1880-87; Special Duty as Assistant Professor of Mechanical Engineering, Lafayette College, 1883-85, Worcester Polytechnic Institute, 1887; Professor of Mechanics and Superintendent of Mechanical Department, Michigan State Agricultural and Mechanical College, 1887-91; Professor of Marine Engineering and Principal Graduate School of Naval Architecture and Marine Engineering, Cornell University, 1891-1904.

HARRIS JOSEPH RYAN, Professor of Electrical Engineering. 9 Santa Inez St.

M. E., Cornell University, 1887. With Western Engineering Co., Lincoln, Neb., 1887-88; Instructor in Physics, Cornell University, 1888-89, Assistant Professor of Electrical Engineering, 1889-92, Associate Professor, 1892-95, Professor, 1895-1905; Judge, Board of Awards, World's Fair, Chicago, 1893; U. S. Government Delegate, International Electrical Congress, St. Louis Exposition, 1904.

GEORGE HEMPL, Professor of Germanic Philology.
20 Lasuen St.

A. B., University of Michigan, 1879; Ph. D., University of Jena, 1889; LL. D., University of Wisconsin, 1904. Principal, Saginaw (Mich.) H. S., 1879-82, La Porte (Ind.) H. S., 1882-84; Instructor in German, Johns Hopkins University, 1884-86; Student, Universities of Göttingen, Tübingen, Strassburg, Jena, and Berlin, 1886-89; Assistant Professor of English, University of Michigan, 1889-93, Junior Professor, 1893-97, Professor of English Philology and General Linguistics, 1897-1906; Professor of English, University of Chicago, Summer Quarter, 1897; President of the American Dialect Society, 1900-05; President of the Modern Language Association, 1902-03; President of the American Philological Association, 1903-04; Chairman of the Department of History of Language, Congress of Arts and Sciences, St. Louis, 1904.

EPHRAIM DOUGLASS ADAMS, Professor of History.
9 Alvarado Row.

A. B., University of Michigan, 1887, Ph. D., 1890. Principal of High School, McGregor, Ia., 1887; Principal of High School, Saginaw (Mich.), 1889; Special Agent in Charge of Street Railways, Eleventh Census, Washington, D. C., 1890; Assistant Professor and afterward Professor of European History, University of Kansas, 1891-1902.

EDWARD CURTIS FRANKLIN, Professor of Organic Chemistry.
1116 Ramona St.

B. S., University of Kansas, 1888, M. S., 1890; Ph. D., Johns Hopkins University, 1894. Chemist to the Palo Alto Plantation and Sugar Factory, Donaldsville, Ga., 1888; Chemist to the Belle Vista Mining and Milling Co., Los Quemados, Costa Rica, 1897; Instructor in Chemistry, University of Kansas, 1888-90; Student at Berlin, 1890-91; Assistant in Chemistry, University of Kansas. 1891-93; Associate Professor, 1894-99, Professor of Physical Chemistry, 1899-1903.

ELLWOOD P. CUBBERLEY, Professor of Education.
1345 Webster St.

A. B., Indiana University, 1891; A. M., Columbia University, 1902, Ph. D., 1905. Instructor in Science, Ridgeville, College (Ind.), 1891; Professor of Physical Science. Vincennes University (Ind.), 1891-93, President, 1893-96; Superintendent of City Schools, San Diego, Cal., 1896-98.

ALPHONSO GERALD NEWCOMER, Professor of English.
Forest Court.

A. B., University of Michigan, 1887; A. M., Cornell University, 1888. Fellow in Classics, Cornell University, 1887-88; Principal, Mt. Morris (Ill.) H. S., 1888-89; Instructor in Latin and French, Knox College, 1889-91.

CHARLES HENRY HUBERICH, Professor of Law.
318 Lincoln Ave.

LL. B., University of Texas 1897, LL. M., 1898; D. C. L., Yale University, 1899; J. U.D., University of Heidelberg, 1905. Student, Universities of Berlin and Heidelberg, 1899-1900; Instructor in Political Science and Law, University of Texas, 1900-03, Adjunct Professor, 1903-05.

†STEWART WOODFORD YOUNG, Professor of Physical Chemistry.
[Morgan Hill.]

B. S., Cornell University, 1890. Assistant in Chemistry, Cornell University, 1890-91; Instructor in Chemistry, Swarthmore College, 1891-93.

ARTHUR BRIDGMAN CLARK, Associate Professor of Drawing.
College Terrace.

B. Ar., Syracuse University, 1888, M. Ar., 1891. Director of Trade Schools and Instructor in Drawing, New York State Reformatory, Elmira, N. Y., 1888-89; Instructor in Architecture Syracuse University, 1889-92.

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†Absent on leave, 1906-07.

FRANK MACE McFARLAND, Associate Professor of Histology. 943 Scott St.

Ph. B., De Pauw University, 1889; A. M., Leland Stanford Jr. University, 1893; Ph. D., University of Würzburg, 1896. Assistant in Biology, De Pauw University, 1888-89; Professor of Biology, Olivet College, 1889-92; Student, Würzburg, Zürich, and Naples, 1894-96.

GEORGE CLINTON PRICE, Associate Professor of Zoology. 5 Salvatierra St.

B. S., De Pauw University, 1890; Ph. D., Leland Stanford Jr. University, 1897. Student in Biology, Johns Hopkins University, 1890-92, University of Munich, 1895-96.

†JOHN CHARLES LOUNSBURY FISH, Associate Professor of Civil Engineering. [Corsica, Pa.]

C. E., Cornell University, 1892. Instructor in Civil Engineering, Cornell University, 1892-93; Division Engineer, L. S. & M. S. Railway, 1906-07.

GUIDO HUGO MARX, Associate Professor of Mechanical Engineering. 356 Lincoln Ave.

M. E., Cornell University, 1893. With Gleason Tool Co., Rochester, N. Y., 1893-94; with Bement. Miles & Co., Philadelphia, 1894-95.

CLYDE AUGUSTUS DUNIWAY, Associate Professor of History. 5 Alvarado Row.

A. B., Cornell University, 1892; A. M., Harvard University, 1894, Ph. D., 1897. Instructor in History, Harvard University and Radcliffe College, 1896-97.

GEORGE ARCHIBALD CLARK, Secretary to the President. 7 Alvarado Row.

B. L., University of Minnesota, 1891. Secretary, U. S. Fur Seal Commission, 1896-98.

GEORGE JAMES PEIRCE, Associate Professor of Botany and Plant Physiology. 943 Bryant St.

B. S., Harvard University, 1890; Ph. D., University of Leipzig, 1894. Assistant in Botany, Harvard University and Radcliffe College, 1890-92; Parker Fellow in Harvard University, studying in Bonn, Leipzig, and Munich, 1892-94; Assistant Professor of Botany, Indiana University, 1895-97.

†HERMAN DE CLERCQ STEARNS, Associate Professor of Physics. [Monrovia, Cal.]

A. B., Leland Stanford Jr. University, 1892; A. M., 1893. Student, University of Berlin, 1897-98.

OLIVER MARTIN JOHNSTON, Associate Professor of Romanic Languages. 4 Alvarado Row.

A. B , Mississippi College, 1890, A. M., 1892; Ph. D., Johns Hopkins University, 1896. Principal, Preparatory department, Mississippi College, 1890-91, Professor of English, 1891-93; Fellow in Johns Hopkins University, 1895-96; Lecturer in French Philology, Byrn Mawr College, 1896-97.

MELVIN GILBERT DODGE, Associate Librarian. Menlo Heights.

A. B., Hamilton College, 1890, A. M., 1894. Librarian, Hamilton College, 1892-1901.

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†Absent on leave, 1906-07.

JOHN FLESHER NEWSOM, Associate Professor of Mining. 121 Waverly St.

A. B., Indiana University, 1891; A. M., Leland Stanford Jr. University, 1893, Ph. D., 1901. Assistant, Arkansas Geological Survey, 1891-95; Instructor in Geology, Indiana University, 1894-96, Assistant Professor, 1896-98.

HENRY WINCHESTER ROLFE, Associate Professor of Greek. 1057 Ramona St.

A. B., Amherst College, 1880, A. M., 1885. Student, University of Leipzig, 1881-83; Instructor in English, Cornell University, 1883-85; Professor of Latin, Swarthmore College, 1885-90; Lecturer on Latin Literature to Postgraduate Students, University of Pennsylvania, 1891-92; University Extension Lecturer, 1891-1900.

DAVID CHARLES GARDNER, Chaplain. 1A Alvarado Row.

Scholar, Lord Scudamore's School, Hereford, England; Student under Farquhar McKerrow, Usk Grammar School, Monmouthshire, England; Graduate, Church Divinity School of the Pacific, San Mateo, 1897; Curate, St. James Mission, San Francisco, 1898; Rector of All Saints' Church, Palo Alto, 1898-1902.

HAROLD HEATH, Associate Professor of Zoology. 1147 Ramona St.

A. B., Ohio Wesleyan University, 1893; Ph. D. University of Pennsylvania, 1898. Assistant in Biology, Ohio Wesleyan University, 1891-93; Professor of Biology, University of the Pacific, 1893-94; Harrison Fellow in Zoology. University of Pennsylvania, 1896-98.

WILLIAM FREEMAN SNOW, Associate Professor of Hygiene. 9 Salvatierra St.

A. B., Leland Stanford Jr. University, 1896, A. M., 1897; M. D., Cooper Medical College, 1900. Student, Johns Hopkins Medical School, 1901-02.

HANS FREDERIK BLICHFELDT, Associate Professor of Mathematics. College Terrace.

A. B., Leland Stanford Jr. University, 1896; Ph. D., University of Leipzig, 1898.

ALBERT ALLYN YOUNG, Associate Professor of Economics. 1027 Emerson St.

Ph. B., Hiram College, 1894; Ph. D., University of Wisconsin, 1902. Student Clerk, United States Census, 1899-1900; University Fellow in Economics, University of Wisconsin, 1900-01, Instructor, 1901-02; Instructor in Economics, Western Reserve University, 1902-04, Associate Professor, 1904; Assistant Professor of Finance, Dartmouth College, 1904-05; Assistant Professor of Economics, University of Wisconsin, 1905-06.

THORSTEIN B. VEBLEN, Associate Professor of Economics. Cedro Cottage.

A. B., Carleton College, 1880; Ph. D., Yale University, 1884. Graduate Student, Johns Hopkins University; Fellow in Economics and Finance, Cornell University, 1891-92; Fellow in Political Economy, University of Chicago, 1892-93, Reader. 1893-94, Associate, 1894-96, Instructor, 1896-1900, Assistant Professor, 1900-06.

†ALBERT CONSER WHITAKER, Associate Professor of Economics. [New York City.]

A. B., Leland Stanford Jr. University, 1899; Ph. D., Columbia University, 1904. Scholar in Economics, Columbia University, 1899-1900, Fellow, 1900-01; Student, University of Berlin, 1901-02; Lecturer in Economics and Social Science, Columbia University, 1906-07.

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†Absent on leave, 1906-07.

ARTHUR MARTIN CATHCART, Associate Professor of Law. 233 Addison Ave.

A. B., Leland Stanford Jr. University, 1896. Student, Harvard University, 1896-67; Registered Office Clerk with Attorneys of Colorado Supreme Court, 1900-02; Attorney-at-Law, Colorado Springs, Col., 1903-04.

ROBERT ECKLES SWAIN, Associate Professor of Chemistry. 638 Channing Ave.

A. B., Leland Stanford Jr. University, 1899; M. S., Yale University, 1901, Ph. D., 1904.

‡GEORGE THOMAS CLARK, Librarian. Public Library, San Francisco.

B.S., University of California, 1886; Assistant Librarian, University of California, 1886-87; Deputy State Librarian, California State Library, 1887-90, Classifier, 1890-94; Librarian, San Francisco Public Library, 1894-1907.

GEORGE HENRY BOKE, Lecturer in Law. 2516 Le Conte Ave., Berkeley.

Ph. B., University of California, 1894; A. M., Harvard University, 1900, LL. B., 1905. Principal of High School and Supervising Principal of Schools, San Rafael, 1895-98; Fellow in Jurisprudence, Harvard University, 1898-1900; Instructor in Jurisprudence, University of California, 1900-03, Assistant Professor of Law, 1903-05, Associate Professor of Jurisprudence, since 1905.

§MORRIS ELMER DAILEY, Lecturer in Education. San Jose.

A. M., Indiana University, 1897; LL. D., Drake University, 1901. Superintendent of City Schools, Fresno, Cal., 1897-99; Vice-President and Teacher of History, San Jose State Normal School, 1899-1900, President since 1900.

KARL G. RENDTORFF, Assistant Professor of German. 1130 Bryant St.

A. M., Leland Stanford Jr. University, 1894, Ph. D., 1896. Student, University of Giessen, 1884-85, University of Kiel, 1885-91.

FREDERICK JOHN ROGERS, Assistant Professor of Physics. 4 Lasuen St.

M. S., Cornell University, 1891. Instructor in Physics, Cornell University, 1892-1900.

†LILLIEN JANE MARTIN, Assistant Professor of Psychology. [In Europe.]

A.B., Vassar College, 1880. Teacher of Science, Indianapolis High School, 1880-89; Vice-Principal and Head of Department of Science, Girls' High School, San Francisco, 1889-94; Student, University of Göttingen, 1894-98.

COLBERT SEARLES, Assistant Professor of Romanic Languages. 521 Melville Ave.

A. B., Wesleyan University, 1895; Ph. D., University of Leipzig, 1899. Instructor in French and Italian, Indiana University, 1899-1900; Associate Professor of English and Modern Languages, University of Arkansas, 1900-01.

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‡Beginning August, 1907.

§For 1907-08.

†Absent on leave, 1906-07

RAYMOND MACDONALD ALDEN, Assistant Professor of English Literature and Rhetoric. 731 Hamilton Ave.

A. B., University of Pennsylvania, 1894; A. M., Harvard University, 1896; Ph. D., University of Pennsylvania, 1898. Instructor in English, Columbian University, Washington, D. C., 1894–95; Assistant in English, Harvard University, 1896–97; Senior Fellow in English, University of Pennsylvania, 1898–99, Instructor, 1899–1901.

WILLIAM ALPHA COOPER, Assistant Professor of German. 1111 Emerson St.

A. B., Marietta College, 1892, A. M., 1897. Student, Universities of Bonn, Leipzig, and Paris, 1892–94; Instructor in German and French, Marietta College, 1895–99, Professor, 1899–1901.

JEFFERSON ELMORE, Assistant Professor of Latin. 1134 Emerson St.

A. B., Leland Stanford Jr. University, 1895, A. M., 1895, Ph. D., 1901. Principal of Merced County High School, 1895–97; Student, Universities of Bonn and Berlin, 1901–02.

JOHN OTTERBEIN SNYDER, Assistant Professor of Zoology. 627 Webster St.

A. B., Leland Stanford Jr University, 1897, A. M., 1899.

HARRY ALVIN MILLIS, Assistant Professor of Economics. 757 Channing Ave.

A. B., Indiana University, 1895, A. M., 1896; Ph. D., University of Chicago, 1899. Reference Librarian, John Crerar Library, Chicago. 1899–1902; Professor of Economics and Sociology, University of Arkansas, 1902–03.

JAMES ROLLIN SLONAKER, Assistant Professor of Physiology. 334 Kingsley Ave.

B. S., University of Wisconsin, 1893; Ph. D., Clark University, 1896. Fellow in Biology, Clark University, 1893–96; United States Fish Commission, Woods Holl, Mass., summer, 1895; Instructor in Zoology, Indiana University, 1896–99, Indiana University Biological Station, 1896–1900; Assistant Professor of Zoology, Indiana University, 1899–1901; Research Assistant in Neurology, University of Chicago, 1901–02, Associate in Neurology, 1902–03.

WILLIAM RANKINE ECKART, Assistant Professor of Mechanical Engineering. 1125 Ramona St.

M. E., Cornell University, 1895. Mechanical Engineer, Siemens Halske Electric Co., Chicago, 1895–96; Construction Engineer, Allison Branch Mine, Grass Valley, Cal., 1896–98; Testing Work for Fraser & Chalmers, in Hawaii and Mexico, 1898–99; with W. R. Eckart, Consulting Engineer, Hydraulic Power Plants and Mining Work, 1899–1903; Consulting Engineer, Geary St. P. & O. R. R., San Francisco, 1902–04.

HALCOTT CADWALADER MORENO, Assistant Professor of Applied Mathematics. 329 Lincoln Ave.

A. B., University of Georgia, 1893, A. M., 1894, B. L., 1896; Ph. D., Clark University, 1900. Tutor in Mathematics, University of Georgia, 1893–97; Scholar and Fellow in Mathematics, Clark University, 1897–1900; Assistant in Mathematics, Clark University, 1900–01.

CLARA S. STOLTENBERG, Assistant Professor of Physiology. 15 Salvatierra St.

A. B., Leland Stanford Jr. University, 1896, A. M., 1897.

‡SAMUEL SWAYZE SEWARD, Jr., Assistant Professor of English. [Reno, Nevada.]

A. B., Columbia College, 1896; A. M., Columbia University, 1897. Scholar in Literature, Columbia University, 1896-97, Assistant in Literature, 1897-99; Student, Oxford University, 1899-1900.

BENJAMIN OLIVER FOSTER, Assistant Professor of Latin. 3 Salvatierra St.

A. B., Leland Stanford Jr. University, 1895; A. M., Harvard University, 1897, Ph. D., 1899. Parker Fellow of Harvard University, studying in the *American School of Classical Studies in Rome*, 1899-1900; Acting Professor of Latin and Greek, State Normal College of Michigan, 1900-01.

DORSEY ALFRED LYON, Assistant Professor of Metallurgy. College Terrace.

A. B., Leland Stanford Jr. University, 1898; A. M., Harvard University, 1902. Assistant in Chemistry, Leland Stanford Jr. University, 1897-98; Instructor in Geology, University of Washington, 1898-99, Assistant Professor of Mining and Metallurgy, 1899-1900. Professor of Mining an Metallurgy and Dean of the School of Mines, 1900-01; Graduate Student, Harvard University, 1901-02; with United States Smelting Co., Utah, 1902.

HENRY LEWIN CANNON, Assistant Professor of History. 1235 Webster St.

A. B., Western Reserve University, 1893; Ph. D., University of Pennsylvania, 1898. Student, Harvard University, 1893-94, Yale University, 1896-97; Fellow in European History, University of Pennsylvania, 1897-98; Instructor in History, University of Cincinnati, 1900-03.

HOWARD JUDSON HALL, Assistant Professor of English. 207 Addison Ave.

B. S., Michigan State Agricultural College, 1890; A. B., Leland Stanford Jr. University, 1896; A. M., Harvard University, 1900. Professor of English and Librarian, University of Arizona, 1891-1904.

AUSTIN FLINT ROGERS, Assistant Professor of Mineralogy and Petrography. 727 Cowper St.

A. B., University of Kansas, 1899, A. M., 1900; Ph. D., Columbia University, 1902. Assistant in Mineralogy, University of Kansas, 1898-1900; Assistant Geologist, University Geological Survey of Kansas, 1898-1900, 1903; Fellow in Mineralogy, Columbia University, 1900-02, Tutor in Mineralogy, 1902-05.

MACY MILLMORE SKINNER, Assistant Professor of German. 10 Alvarado Row.

A. B., Harvard University, 1894, A. M., 1895, Ph. D., 1897. Harvard Fellow, University of Strassburg, 1897-98, University of Berlin, 1898-99; Instructor in German, Harvard University, 1899-1905.

ELMER REGINALD DREW, Assistant Professor of Physics. 1321 Waverly St.

B S., University of California, 1888; Ph. D., Cornell University, 1903. Student, University of Chicago, 1897-98, University of Berlin, 1903-05; Assistant in Physics, University of California, 1889-92, Instructor, 1892-1902.

LEE EMERSON BASSETT, Assistant Professor of Elocution. 7 Salvatierra St.

A. B., Leland Stanford Jr. University, 1901. Graduate Cumnock School of Oratory, Los Angeles, 1898; Instructor in Public Speaking, University of Southern California, 1898-99; Instructor in Elocution, Long Beach, Cal., summer school, 1898; Student, School of Expression, Boston, 1901.

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‡Absent on leave, second semester, 1906-07.

HENRY SUZZALLO, Assistant Professor of Education.
158 Encina Hall.

A. B., Leland Stanford Jr. University, 1899; A. M., Columbia University, 1902, Ph. D., 1905. Principal, Rural school, Alviso, Cal., 1896-97; Principal, Elementary School, Alameda, Cal., 1899-1901; Graduate Scholar, Teachers' College, 1901-02, Fellow, 1903-04; Instructor, San Francisco State Normal School, 1902-03; Deputy Superintendent of City Schools, San Francisco, 1903-04; Lecturer in Education, Teachers' College, Columbia University, 1904-05.

†ANSTRUTHER ABERCROMBIE LAWSON, Assistant Professor of Botany. [In Europe.]

B. S., University of California, 1897, M. S., 1898; Ph. D., University of Chicago, 1901; Fellow in Botany, University of Chicago, 1900-01.

ERNEST WHITNEY MARTIN, Assistant Professor of Latin. 525 Lincoln Ave.

A. B., University of Chicago, 1900; A. M., Leland Stanford Jr. University, 1902. Instructor in Latin and Greek, Private School, Clarinda, Ia., 1895-96; Principal of High School, 1896-98; Student, University of Berlin, and American School of Classical Studies, Rome, 1900-01.

KENNETH LIVERMORE CURTIS, Assistant Professor of Electrical Engineering. 8 Alvarado Row.

B. S., University of Colorado, 1901; E. E., Leland Stanford Jr. University, 1906. With General Electric Co., Schenectady, N. Y., 1901-03

HENRY DAVID GRAY, Assistant Professor of English.
219 Addison Ave.

Ph. B., Colgate University, 1897; A. M., Columbia University, 1898, Ph. D., 1904. Assistant in German and French, Colgate Academy, 1896-07; University Scholar, Columbia University, 1898-1900; Instructor in Dramatic Literature, American Academy of Dramatic Arts, 1900-02; Instructor in English, University of Texas, 1902-05; Lecturer in English, Columbia University, Summer Session, 1905.

WILLIAM DINSMORE BRIGGS, Assistant Professor of English. 315 Melville Ave.

A. B., Leland Stanford Jr. University, 1896; A. M., Harvard University, 1899, Ph. D., 1900. Student, Johns Hopkins University, 1896-97; Instructor in English and German, University of Vermont, 1900-01; Instructor in English, Western Reserve University, 1901-06.

LE ROY ABRAMS, Assistant Professor of Botany.
158 Encina Hall.

A. B., Leland Stanford Jr. University, 1899, A. M., 1902. Acting Professor of Botany, University of Idaho, 1899-1900; Assistant in Botany, Leland Stanford Jr. University, 1900-02, Instructor, 1902-04; Fellow in Botany, Columbia University, 1904-05; Assistant Curator, Division of Plants, United States National Museum, since 1905.

WESLEY NEWCOMB HOHFELD, Assistant Professor of Law. 4 Lasuen St.

A. B., University of California, 1901; LL. B., Harvard University, 1904. San Francisco Harvard Club Fellow at Harvard University, 1901-02; Attorney at Law, practicing in San Francisco, 1904-05; Instructor, Hastings Law College, University of California, 1905.

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†Absent on leave, 1906-07.

‡SIDNEY DEAN TOWNLEY, Assistant Professor of Applied Mathematics. Ukiah, Cal.

B. S., University of Wisconsin, 1890, M. S., 1892; D. Sc., University of Michigan, 1897. Fellow in Astronomy, University of Wisconsin, 1890-91, Assistant in Astronomy and Mathematics, 1891-92; Hearst Fellow in Astronomy, University of California (Lick Observatory), 1892-93; Instructor in Astronomy, University of Michigan, 1893-95, 1896-98; Student, Universities of Berlin and Munich, 1895-96; Instructor in Practical Astronomy, University of California, 1898-1903, Lecturer in Astronomy, 1904-07; Astronomer in Charge of International Latitude Observatory, 1903-07.

‡JAMES MARVIN MOTLEY, Assistant Professor of Political Science. Aurora, N. Y.

A. B., William Jewell College, 1901, A. M., 1904; Ph. D., Johns Hopkins University, 1906. Fellow in Economics, Johns Hopkins University, 1904, Instructor, 1906; Acting Secretary, Baltimore Federated Charities, 1905; Professor of Economics and Sociology, Wells College, 1906-07.

JOHN EZRA McDOWELL, Assistant Registrar. 20 Lasuen St.

A. B., Leland Stanford Jr. University, 1900.

‡HENRY WALDGRAVE STUART, Assistant Professor of Philosophy. Lake Forest Ill.

Ph. B , University of California, 1893; Ph. D., University of Chicago, 1900. Teacher, Hollister (Cal.) H. S., 1893-94; Fellow in Political Economy, University of Chicago, 1894-96; Instructor (pro tem) in Economics and Psychology, Washington University, St. Louis, 1896-97; Teacher, Central School, Oakland (Cal.), 1897-98; Principal, Woodland (Cal.) H. S., 1898-99; Fellow in Philosophy, University of Chicago, 1899-1900; Instructor in Economics and History, Ripon College, 1900-01; Instructor in Philosophy, State University ol Iowa, 1901-04; Assistant Professor of Philosophy, Lake Forest College, 1904-06, Acting Professor, 1906-07.

CLIFFORD GILMORE ALLEN, Assistant Professor of Romanic Languages. 321 Melville Ave.

A. B., Boston Universitv, 1900; A. M., Leland Stanford Jr. University, 1903; Docteur de l'Université de Paris, 1906. Student, University of Paris, 1903-04; Fellow of Boston University and Student of Universities of Paris and Madrid, 1904-05.

WILLIAM ALBERT MANNING, Assistant Professor of Mathematics. 329 Lincoln Ave.

A. B , Willamette University, 1900; A M., Leland Stanford Jr. University, 1902, Ph. D., 1904.

JOSEPH GRANT BROWN, Assistant Professor of Physics. 1013 Ramona St.

A. B., Leland Stanford Jr. University, 1901, A. M., 1903.

‡ALBERT LEON GUÉRARD, Assistant Professor of French. Williamstown, Mass.

Agrégé de l'Université de Paris, 1906. Instructor in the Romanic Languages, Williams College, 1906-07.

LUTHER BURBANK, Lecturer on Plant Evolution. Santa Rosa, Cal.

JULIUS EMBRET PETERSON, Foreman of the Forge. 660 Homer Ave.

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‡Beginning August, 1907.

EDWIN CHAPIN STARKS, Curator in Zoology.
1115 Ramona St.

Assistant in United States Bureau of Biological Survey, 1897-99; Curator of the Museum, University of Washington, 1899-1900.

†ALVIN JOSEPH COX, Instructor in Chemistry.
[Manila, P. I.]

A. B., Leland Stanford Jr. University, 1901, A. M., 1902; Ph. D., University of Breslau, 1904.

CHARLES FREDERICK SCHMUTZLER, Instructor in German.
219 Ramona St.

A. B., Leland Stanford Jr. University, 1898, A. M., 1899. Student, University of Berlin, 1903-04.

EDWARD JOHN STANLEY, Instructor in Pattern Making.
433 Hawthorne Ave.

Machinist with Pacific Iron Works, San Francisco, 1878-79; Pattern Maker, 1880-86; Foreman, Pattern Shop, Union Iron Works, San Francisco, 1886-1901.

†HALBERT WILLIAM CHAPPEL, Instructor in Hygiene.
[New York City.]

A. B., Leland Stanford Jr. University, 1901, LL. B., 1903 A. M., 1906.

JAMES BENNETT LIGGETT, Instructor in Foundry Practice.
424 Lytton Ave.

Apprentice and Foundry Moulder, Falls Rivet and Machine Co., Cuyahoga Falls, O., 1883-88, Webster, Camp & Lane, Akron, O., 1888-93, Bowler & Co., Cleveland. O., 1893-98; Foundry Foreman, City Foundry Co., Cleveland, O., 1898-99; Foreman, Born Steel Range Co., Cleveland, O., 1899-1902; Foreman of Foundry, Westinghouse Electric Co., Cleveland, O., 1902.

CHLOE LESLEY STARKS, Instructor in Drawing.
1115 Ramona St.

†STANLEY SMITH, Instructor in Romanic Languages.
[In Europe.]

A B., Leland Stanford Jr. University, 1903, A. M., 1905.

THEODORE PALMATEER, Foreman of the Machine Shop.
Mayfield.

†PAYSON JACKSON TREAT, Instructor in History.
[In Europe.]

A. B., Wesleyan University, 1900; A. M., Columbia University, 1903

SAMUEL BARCLAY CHARTERS, Jr., Instructor in Electrical Engineering.
750 Bryant St.

M. E., Cornell University, 1904. Delegate International Electrical Congress, St. Louis Exposition, 1904; with Westinghouse Electric & Mfg. Company, Pittsburg, Pa., 1904-05.

LEON PATTESON LEWIS, Instructor in Law.
561 Middlefield Road.

Ph. B., University of Chicago, 1902, J. D., 1905.

HUBERT HARRY HALL, Instructor in Civil Engineering.
21 Salvatierra St.

A. B., Leland Stanford Jr. University, 1904.

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†Absent on leave, 1906-07.

RENNIE WILBUR DOANE, Instructor and Curator in Entomology. 808 Waverly St.

A. B., Leland Stanford Jr. University, 1896 Assistant in Zoology and Botany, Washington State College, 1896–99, Assistant Professor of Zoology and Entomology, 1899–1901; Superintendent Fisheries Experiment Station, Keyport, Wn., 1901–03.

HOMER PRICE EARLE, Instructor in Romanic Languages. 3 Salvatierra St.

A. B., Leland Stanford Jr. University, 1904. Student, Johns Hopkins University, 1904–06.

†FRANK ERNEST THOMPSON, Instructor in Education. [New York City.]

A. B., Leland Stanford Jr. University, 1901. Assistant in Education, Leland Stanford Jr. University, 1901–02; Instructor, San Francisco State Normal School, 1902–03; Instructor in Education and Director of Training School, San Diego State Normal School, 1903–06; Graduate Scholar Teachers' College, Columbia University, 1906, Fellow, 1907.

LAWRENCE EDMINSTER CUTTER, Instructor in Mechanical Engineering. Mountain View.

A. B., Leland Stanford Jr. University, 1906.

MARY ISABEL McCRACKEN, Instructor in Bionomics. 15 Salvatierra St.

A. B., Leland Stanford Jr. University, 1904, A. M., 1905.

FREDERICK ALEXANDER MANCHESTER, Instructor in English. 720 Cowper St.

A. B., University of Wisconsin 1904, A. M., 1905. Scholar in English, University of Wisconsin, 1904–05, Fellow in English, 1905–06.

LESTER LEVI CARTER, Instructor in Civil Engineering. 191 Encina Hall.

A. B., Leland Stanford Jr. University, 1906.

CHARLES ANDREW HUSTON, Instructor in Law. 561 Middlefield Road.

A. B., University of Chicago, 1902. Fellow in Political Economy, University of Chicago, 1902–03, Assistant in Rhetoric, 1903–04, Associate in Rhetoric, 1904–06.

ROYCE REED LONG, Instructor in Hygiene. Channing Ave.

Physical Director, Young Men's Christian Association, Dixon, Illinois, 1897–98, Aurora, Ill., 1899–1900; Assistant in Encina Gymnasium, 1902–04; Director of Vanderbilt University Gymnasium, 1904–06.

WILLIAM ORVILLE MENDENHALL, Instructor in Applied Mathematics. 412 Cowper St.

A. B. Penn College, 1900, A. M., 1901; A. B., Haverford College, 1901. Principal, Pleasant Plain Academy (Ia.), 1901–02; Professor of Mathematics, Wilmington College, 1902–04; Student, Clark University, 1904–05.

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†Absent on leave, 1906–07.

CHARLES NORMAN CROSS, Instructor in Mechanical Engineering.
253 Homer Ave.

M. E., Cornell University, 1906. Assistant Engineer, Long Island State Hospital, Brooklyn, N. Y., 1905; Dynamo and Switchboard Attendant with the New York Edison Co., New York City, 1905–06; Electrician with the Lackawanna Steel Co., Buffalo, N. Y., 1906.

‡GEORGE HOLLAND SABINE, Instructor in Philosophy.
Ithaca, N. Y.

A. B., Cornell University, 1903, Ph. D., 1906. Sage Fellow in Philosophy, Cornell University, 1905–06, Assistant in Philosophy, 1906–07.

WALTER KENRICK FISHER, Instructor in Zoology.
471 Melville Ave.

A. B., Leland Stanford Jr. University, 1901, A. M., 1903, Ph. D., 1906.

JOHN PEARCE MITCHELL, Instructor in Chemistry.
235 Embarcadero Road.

A. B., Leland Stanford Jr. University, 1903, A. M., 1904. Student, University of Leipzig, 1904–05.

WILLIAM HENRY SLOAN, Instructor in Chemistry.
235 Webster St.

A. B. Leland Stanford Jr. University, 1903, A. M., 1905, Assistant Chemist, San Francisco Board of Health, 1905–06.

BRUNO BOEZINGER, Instructor in German.
329 University Ave.

A. B., Fort Worth University, 1894, A. M., 1895. Instructor in German, North Texas Normal School, 1895–98; Principal, German Department, San Antonio (Tex.) H. S., 1899-1906; Instructor in German, Summer School, University of Texas, 1896.

THERESA PEET RUSSELL, Instructor in English.
12 Lasuen St.

Ph. B., State University of Iowa, 1895. Teacher in Denison Normal School, 1895–96; Principal Villisca High School, 1896-98; Graduate Student at Radcliffe College, 1898-99; Teacher in Anamosa High School, 1899-1900.

LOUIS JOHN MAYREIS, Instructor in Metallurgy.
16 Salvatierra St.

A. B., Leland Stanford Jr. University, 1907.

FLORENCE LUNDBORG, Instructor in Drawing.
1524 Union St., San Francisco

Art Student, Hopkins Art School, San Francisco, 1893-97; Studied in Paris and Florence, 1897–1900; Professional work in Book Illustrating and Mural Decoration, 1895–1906.

‡HERMANN JOHANN HILMER, Instructor in German.

A. B., University of Michigan, 1904.

†JOHN FRANCIS COWAN, Acting Instructor in Physiology.
[New York City.]

A. B., Leland Stanford Jr. University, 1902.

HARRY BAKER HUMPHREY, Acting Instructor in Botany.
1103 Ramona St.

B. S., University of Minnesota, 1899.

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‡Beginning August, 1907.

†Absent on leave, 1906–07.

WILLIAM EDMUND BURKE, Acting Instructor in Chemistry. 603 Lytton Ave.

CATHERINE LEOTA FIELDS, Acting Instructor in English. 10 Salvatierra St.
A. B., Leland Stanford Jr. University, 1903.

ASSISTANTS

German

ADELE MEYER. 1130 Bryant St.

Romanic Languages

LILIAN GERTRUDE FLEISHER. 27 Roble Hall
B. L., University of California, 1904.

MERCEDES MARIA DE LUNA. 12 Lasuen St.

EDWIN HUME SKINNER. 228 Bryant St.
A. B., Leland Stanford Jr. University, 1903.

English

LOUISE KATE FLEMING. 1139 Ramona St.
A. B., Leland Stanford Jr. University, 1906.

EDITH R. MIRRIELEES. 331 Hamilton Ave.
A. B., Leland Stanford Jr. University, 1907.

ALICE MAY ROBBINS. 22 Lasuen St.
A. B., Mills College, 1906.

HELEN THOBURN. 1 Alvarado Row.

WALTER YEELING WENTZ. 157 Encina Hall
A. B., Leland Stanford Jr. University, 1906.

Education

REBECCA BEATRICE FRENCH. 184 S. 1st St., San Jose
A. B., Leland Stanford Jr. University, 1905.

History

CHARLOTTE MABLE LORD. 526 Waverly St.
A. B., Leland Stanford Jr. University, 1902, A. M., 1905.

Economics

IRA BROWN CROSS. Stanford Inn
A. B., University of Wisconsin, 1905, A. M., 1906.

Drawing

MAUD HOUSTON LANKTREE. 11 Alvarado Row
A. B., University of California, 1902.

Mathematics

SADIE LOIS GILMORE. 19 Lasuen St.

Applied Mathematics

ROSS DUDLEY BRACKETT.	13 Encina Hall
CYRIL FRANK ELWELL.	181 Encina Hall
GEORGE WILLIAM McDANIEL.	37 Encina Hall
EDWARD GWYN SHEIBLEY.	146 Encina Hall
DONALD STEEL.	460 Channing Ave.
HALBERT RAY THOMAS.	235 Emerson St.

Physics

SHIRLEY HYATT. A. B., Leland Stanford Jr. University, 1906.	11 Roble Hall
WENDELL PRESCOTT ROOP.	3 Encina Hall
PERLEY ASON ROSS.	College Terrace
GEORGE ARMSTRONG TARBELL.	8 Encina Hall

Chemistry

BERTON WOODFORD CRANDALL. A. B., Leland Stanford Jr. University, 1907.	737 Waverly St.
JOHN FRANKLIN ELLIS.	115 Encina Hall
DANE MANSON GREER. A. B., Leland Stanford Jr. University, 1906, Chem. E., 1907.	8 Salvatierra St.
DENNIS ROBERT HOAGLAND.	45 Encina Hall
LOVELL LANGSTROTH.	1 Lasuen St.
JACOB MEDAY PRICE.	543 Byron St.
EDWARD WALDO RICE.	11A Salvatierra St.
HANANIAH HUGH ROSS.	235 Emerson St.
HAZEL WOOD SEVERY.	53 Roble Hall
HUGH LESLIE THOMSON. A. B., Leland Stanford Jr. University, 1907.	6 Lasuen St.

Botany

RICHARD MORRIS HOLMAN.	459 Hamilton Ave.

Systematic Botany

OLIVE AGATHA HUMPHREY. B. S., University of Minnesota, 1899.	1103 Ramona St.
JAMES IRA WILSON McMURPHY.	College Terrace

Physiology and Histology

HUBERT OLIVER JENKINS.	3 Lasuen St.
DEXTER NEWELL RICHARDS.	35 Encina Hall
LEO LEONIDAS STANLEY.	39 Encina Hall

Hygiene and Physical Training

FLORENCE BOLTON.	21 Lasuen St.
PEARL MYRTLE HORN.	34 Roble Hall
FIELDEN KINLEY.	43 Encina Hall
EDITH VIRGINIA MATZKE. M. D., Woman's Medical College, Philadelphia, 1895.	1211 Bryant St.
VERA TOWNSEND. A. B., Leland Stanford Jr. University, 1901.	414 Bryant St.
HARRY ALPHONSO WYCKOFF.	342 Homer Ave.

Zoology

JOHN ROWLEY, Taxidermist.	505 Everett Ave.
ROBERT EARL RICHARDSON, Research Assistant. A. B., University of Illinois, 1901.	

Entomology and Bionomics

ROSE W. PATTERSON. A. B., Leland Stanford Jr. University, 1907.	7 Alvarado Row
BERTHA AMELIA WILTZ.	213 Emerson St.

Geology and Mining

ROY SELDON KELLOGG.	8 Salvatierra St.
MARGARET POST.	515 Everett St.

Civil Engineering

MYRON CARLOS BURR.	80 Encina Hall
SANFORD BALLARD DOLE.	11 Lasuen St.
EVERETT ST. JOHN DUNBAR.	5 Lasuen St.
WILLIAM WATKIN EDWARDS.	16 Alvarado Row
CARL McKEE HOSKINSON.	195 Encina Hall
ARTHUR DICKINSON HUGHES.	131 Encina Hall
STUART MOSER.	235 Emerson St.
CHARLES HUGH PAXTON.	840 Bryant St.

Mechanical Engineering

WILLIAM LEAVENWORTH DURAND.	2 San Juan St.
ROBERT RISDON PRATT.	65 Encina Hall
WILLIAM CHRISTIAN THEILE.	8 Salvatierra St.

President's Office

DAVID TIMMINS FULLAWAY, Stenographer.
532 Forest Ave.

JOHN PARKS HEMPHILL. Stenographer.
69 Encina Hall

HELEN THOBURN. 1 Alvarado Row

Registrar's Office

†SUSAN BROWN BRISTOL, Secretary in charge of Recommendation of Teachers. [London, England.]
A. B., Leland Stanford Jr University, 1897.

CECELIA FREEMAN ATHERTON. 19 Lasuen St.
A. B., Leland Stanford Jr. University, 1904.

FRED DAN POST, Stenographer. College Terrace

HARRIETT BROWN COOLIDGE, Acting Secretary Recommendation of Teachers. 440 Cowper St.
A. B., Leland Stanford Jr. University, 1902.

UNIVERSITY LIBRARY

Staff

FLORENCE HUGHES, Head Cataloguer.
1248 Waverly St.
Cataloguer, Indiana University Library, 1894-98.

LILLIAN PEARLE GREEN, Reference Librarian.
15 Lasuen St.
A. B. Leland Stanford Jr. University, 1898; Student, New York State Library School 1900-01.

ALICE NEWMAN HAYS, Classifier.
3 Alvarado Row.
A. B., Leland Stanford Jr. University, 1896; B. L. S., New York State Library School, 1903; Assistant, Home Education Department, New York State Library, 1901.

MARTHA ELIZABETH HAVEN, Supervisor Accessions.
20 Lasuen St.
A. B., Leland Stanford Jr. University, 1896; Student, University of California (Summer) Library School, 1902.

HARRIETTE MILES, Supervisor Serials.
17 Salvatierra St.
Graduate, Illinois State Library School, 1891. Student, University of Kansas, 1895, 1898-99.

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†Absent on leave, second semester, 1906-07.

HELEN BINNINGER SUTLIFF, Cataloguer.
15 Salvatierra St.

A. B, University of Kansas, 1890; Head Cataloguer, University of Kansas Library, 1891-1905; Cataloguer in Columbia University Library, Summer, 1901.

JOHN EDWARD GOODWIN, Supervisor Stacks and Loans.
11 Alvarado Row.

A. B., University of Wisconsin, 1901; B. L. S., New York State Library School, 1905. Classifier and Cataloguer, Madison (Wis.) Free Library, 1901-04; Assistant, Legislative Reference Department, Wisconsin Free Library Commission, 1903.

BELLE HEBER THOMPSON, Chief Loan Desk Assistant.
909 Alma St.

Assistants

MILDRED IRENE CROSIER. 11 Salvatierra St.

ELIZABETH HADDEN, Cataloguer. 1157 Ramona St.

ANNA GERTRUDE HALL. 465 Hamilton Ave.

ALFRED LAWRENCE KOCHER. San Jose

BLANCHE JULIA MOBLEY. 757 Channing Ave.

LETITIA PATTERSON. 431 University Ave.

A. B., Leland Stanford Jr. University, 1901.

SETH BLAINE THOMPSON. 14 Lasuen St.

MAIDA ROSSITER. 15 Lasuen St.

A. B., Cornell University. 1903.

ELMER ELLIS YOUNG. 85 Encina Hall

Law Library

EARL LAMB. 640 S. 11th St., San Jose

A. B., Leland Stanford Jr. University, 1905.

ALEXANDER DEUCHAR LARNACK. 635 Bryant St.

THOMAS EDGAR ROBINSON. College Terrace

MEMORIAL CHURCH

†BENJAMIN COLMAN BLODGETT, Organist.
603 Waverly St.

Mus. Doc. Oxon., 1877. Student, University and Conservatory of Music, Leipzig, 1858-61; Principal of Music School, Pittsfield, Mass., 1865-78; Director of Music, Smith College, 1878-1903; Honorary Fellow, London Society of Arts and Letters, 1880; Member, Wagner Musik-Verein, Bayreuth, 1883, New York Art Club, 1890.

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†Absent on leave.

LELAND STANFORD JUNIOR MUSEUM

HARRY C. PETERSON, Curator. 672 Homer Ave.

ROBLE HALL

LUCRETIA HOUSTON LANKTREE, Matron. Roble Hall

BUSINESS OFFICE

CHARLES GARDNER LATHROP, Treasurer and Business Manager. Alta Vista

DAVID MONASCH, Purchasing Agent, Union Trust Bldg., San Francisco

SAMUEL H. RICH, Cashier. 1158 Ellis St., San Francisco

H. W. BEEBE, Office Manager. 321 Cowper St.

R. L. NELSON, Bookkeeper. 319 Alma St.

ALLEN KNIGHT, Auditor. 502 California St., S. F.

R. H. WORSLEY, Storekeeper. 760 Bryant St.

FANNIE HADDEN, Stenographer. 1157 Ramona St.

JEREMIAH CROWLEY, Foreman of the Farm, Mayfield

M. H. DORGAN, Chief Plumber. Mayfield

R. HAMILTON, Chief Carpenter. Mayfield

P. J. HEISEL, Chief Electrician. Palo Alto Hotel

C. P. HUGHES, Chief Engineer. Cooksey Lodge

CHARLES F. MILLER, Chief Gardener. 315 Lytton Ave.

A. A. QUINN, Clerk Encina Hall. 553 Forest Ave.

T. B. SCOTT, Storekeeper Chemical Laboratory. Mayfield

F. A. STEVENS, Foreman Mechanician Shop. 430 Tasso St.

P. J. TULLEY, Chief Painter. Menlo Park

WALTER UHLMAN, Custodian Mechanical Laboratory. 420 Emerson St.

ORGANIZATION

Foundation

The founding, at Palo Alto, of "a university for both sexes, with the colleges, schools, seminaries of learning, mechanical institutes, museums, galleries of art, and all other things necessary and appropriate to a university of high degree," was determined upon by the Hon. Leland Stanford and Jane Lathrop Stanford, in 1884. In March of the year following the Legislature of California passed an Act providing for the administration of trust funds in connection with institutions of learning. November 14, 1885, the Grant of Endowment was publicly made in accordance with this Act, and on the same day the Board of Trustees held its first meeting, in San Francisco. The work of construction was at once begun, and the cornerstone laid May 14, 1887, the nineteenth anniversary of the birth of Leland Stanford, Junior. The University was formally opened to students October 1, 1891.

Name and Purpose

"Since the idea of establishing an institution of this kind, for the benefit of mankind, came directly and largely from our son and only child, Leland, and in the belief that had he been spared to advise as to the disposition of our estate, he would have desired the devotion of a large portion thereof to this purpose, we will that for all time to come the institution hereby founded shall bear his name, and shall be known as The Leland Stanford Junior University."

The object of the University is "to qualify students for personal success and direct usefulness in life"; its purposes, "to promote the public welfare by exercising an influence in behalf of humanity and civilization, teaching the blessings of liberty regulated by law, and inculcating love and reverence for the great principles of government as derived from the inalienable rights of man to life, liberty, and the pursuit of happiness."

Location

The University is located on the Palo Alto estate in the Santa Clara Valley, thirty-three miles southeast of San Francisco, on the Coast Division of the Southern Pacific Railway. The estate consists of about nine thousand acres, partly level and partly rising into the foothills of the Santa Cruz Range. The Bay of San Francisco lies about three miles east of the University buildings. Across the bay the Monte Diablo Range rises to the height of over four thousand feet, with the Lick Observatory crowning Mount Hamilton, the highest of the range, plainly visible. To the southwest, between the valley and the ocean, is the heavily wooded Santa Cruz Range, two thousand to three thousand feet in height.

The Santa Clara Valley is one of the most attractive portions of the State in climate, in natural beauty, and in the fertility and adaptiveness of its soil to all the varied fruits of California. The characteristics of the climate are its evenness of temperature, its pure and bracing air, and its freedom alike from the fogs and harsh winds of the coast and from the oppressive summer heat of the interior valleys. In winter the mercury rarely falls below 30 degrees, and the average midday temperature is about 55 degrees; in summer the average midday temperature is between 70 degrees and 80 degrees, with the nights below sixty degrees. The rainfall, of about fifteen inches, is chiefly confined to the months from December to April, inclusive.

Endowment

The landed endowment of the University, in addition to the Palo Alto estate, consists of the Vina tract, in Tehama County, of fifty-three thousand acres; the Gridley tract, in Butte County, of eighteen thousand acres; various tracts of minor importance; and the Stanford residence property in San Francisco. The main endowment of the University, consisting of the greater part of the Stanford estate, is vested in interest bearing securities.

Buildings

The central group of buildings, constituting two quadrangles, the one surrounding the other, is an adaptation of the Mission Architecture, and reproduces on an imposing scale the open arches, long colonnades, and red tile roofing of the old Spanish Missions of California. The Inner Quadrangle consists of twelve one-story buildings and the Memorial Church, connected by a continuous open arcade, and surrounding a court 586 feet long by 246 feet wide, or three and a quarter acres. The buildings are of buff sandstone, somewhat varied in color, the stonework of broken ashlar, with rough rock face, and the roofs covered with red tile.

The fourteen buildings of the Outer Quadrangle are constructed of the same material and in the same general style as the Inner Quadrangle. They are also connected on the outer side by open arcades extending entirely around the quadrangle. The extreme length of the Outer Quadrangle is 894 feet.

The LELAND STANFORD JUNIOR MUSEUM, a series of connected buildings in quadrangular form, is situated a quarter of a mile from the quadrangles, and on the west side of the Palo Alto Avenue. The museum contains the archaeological and art collections of the University.

The CHEMISTRY BUILDING is located between the Quadrangles and the Museum. It consists of two separate structures—the main Chemistry Building and the Assaying Laboratory.

Behind the central quadrangles are located the workshops of the engineering departments, experimental laboratories, power-houses, etc.

The dormitories are east and west of the quadrangles. ENCINA HALL, for young men, is at the east, and has accommodations for three hundred students. ROBLE HALL, for young women is at the west, and will accommodate one hundred students. MADROÑO HALL is a frame building, at present leased to private parties, but receiving only women students. It will accommodate about thirty students.

ENCINA GYMNASIUM and ROBLE GYMNASIUM are substantial frame buildings, equipped with the necessary apparatus and appliances for physical training.

The UNIVERSITY INN is a frame building, just east of the quadrangles. It is intended primarily as a University commons for students living on the campus.

The grounds immediately about the University have been reserved, in part for experimental and ornamental purposes, and in part as residence sites for members of the Faculty and others who may desire to live on the University campus.

Scientific Collections

It is intended to bring together in the museums of the University a full representation of the natural history and mineral products of California, collections of all books, pamphlets, photographs, and maps bearing upon the early history of the West, and full collections of Indian antiquities and illustrations of aboriginal life. It is desired to receive donations from all persons who are interested in the work and who have material of value to the museums. Collections sent in this way will be carefully labeled and preserved, and the name of the donor will be kept on record. Messrs. Wells, Fargo & Co. will transport such gifts to the University free of charge, in shipments of fifty pounds or less, from railroad points in California.

Trustees

The general management and control of the institution is vested in a Board of Trustees originally numbering twenty-four, and chosen for life. By a modification of the Founding Grant, effected in 1899, the number of trustees was reduced to fifteen, with future elections for a term of ten years. The Board of Trustees fills all vacancies, elections being by ballot. The Founding Grant directs that "the Board of Trustees shall annually report all their proceedings to the person, who, for the time being, shall fill the office of Governor of the State of California, and shall accompany such report with a full account of their financial operations for the preceding year, and with a statement of the financial affairs of the institution."

The University Faculty

The power and authority of the University Faculty is vested in the Academic Council, consisting of the President of the University, the professors and associate professors, the librarian, the registrar, such assistant professors as have been upon the roll of the faculty for three years, whether as assistant professors or instructors, and such other officers of the University or members of the teaching staff as the Academic Council may, with the assent of the Board of Trustees, determine.

All general University regulations, statutes, and rules as to matters within the province of the faculty, must be initiated in and passed by the Academic Council. The Academic Council has general power and responsibility for the internal administration of the University, subject to express provisions contained in the Articles of Organization respecting the methods of exercising such powers through the President of the University, the Advisory Board, the Standing Committees, and the Department Faculties.

The Advisory Board consists of nine members of the rank of professor, one from each of the five department groups, and four chosen without reference to groups. All executive acts of general importance, such as recommendations for appointments, promotions, and dismissals, for the creation of new departments or chairs, etc., must be submitted by the President to the Advisory Board. The Advisory Board is also privileged to make such recommendations to the President, regarding policy, as it may decide by vote to be expedient, but no recommendations for appointments, promotions, or dismissals, may originate with the Advisory Board

The Executive Committee of the Academic Council consists of the President, Vice-President, Registrar, and two members from each department group elected by the Academic Council. The Executive Committee appoints the Academic Committees of the Council and formulates the duties and controls the policy of Administrative and Academic Committees.

The Standing Administrative Committees of the Council are appointed by the President subject to the approval of the Advisory Board.

The Department Faculties consist of the professors, associate professors, assistant professors, and instructors in the several departments, but only members of the Academic Council have the right to vote. A Department Faculty has direction of the work of instruction in the department and of the internal administration of the department, subject only to such control as is vested in the Board of Trustees, the President of the University, or the Academic Council. The Executive Head of the Department Faculty is designated by the

President with the approval of the Advisory Board and of the Board of Trustees.

Departments

The work of the University embraces the following departments, divided into groups for the purpose of elections to the Advisory Board and Executive Committee, as indicated:

(1) Greek, Latin, Germanic Languages, Romanic Languages, English Literature and Rhetoric, English Philology; (2) Botany, Systematic Botany and Forestry, Physiology and Histology, Hygiene, Entomology and Bionomics, Geology and Mining; (3) Psychology, Mathematics, Physics, Chemistry; (4) Philosophy, Education, History, Economics and Social Science, Law; (5) Drawing, Applied Mathematics, Civil Engineering, Mechanical Engineering, Electrical Engineering.

Student Organizations

The general direction of student interests, including athletics, musical organizations, intercollegiate debating, etc., is intrusted to the Associated Students. Numerous general student organizations have been formed for mutual assistance and improvement in various lines. The Young Men's Christian Association and the Young Women's Christian Association hold devotional meetings and carry on courses of Bible study throughout the year. During the opening week of the first semester the Associations maintain an Information Bureau for the accommodation of new students. In conjunction with the Faculty Committee on Public Health, the Associations compile each year a list of rooming and boarding-houses which have been inspected and approved; they also manage the Student Employment Bureau. Two college journals, the *Daily Palo Alto* and *Sequoia*, are published by the Associated Students. The *Chaparral* is published twice a month, under the auspices of the Press Association. The *Quad* is an annual, published by the Junior Class. The *Alumnus* is published monthly by the Alumni Association.

The Marine Biological Laboratory

The Marine Biological Laboratory, founded by the liberality of Mr. Timothy Hopkins, and located at Pacific Grove, on the Bay of Monterey, is a branch of the biological work of the University..

ADMISSION TO THE UNIVERSITY

I. TO UNDERGRADUATE STANDING

Candidates must be at least sixteen years of age. They must present satisfactory recommendations as to personal character, and, if from other colleges or universities, must bring letters of honorable dismissal.

Preparation for undergraduate standing implies the completion of a full four years' high-school course, or its equivalent.

Fifteen units are required for undergraduate standing, each unit representing one full year's work in the high school, with daily recitations, two laboratory periods being regarded as the equivalent of one recitation period. These fifteen units may be made up of English Composition (1½ units) and such other subjects (aggregating 13½ units) as may be selected by the candidate from the lists given below, except that subject 12 may not be offered with either subjects 9-10 or subjects 10-11, nor Geometrical Drawing with subject 24.

Entrance credit may be obtained (A) on examination (see pp. 57-58), or (B) wholly or in part without examination (see pp. 58-61).

Entrance Subjects

1. English Compos'n (1½)
2. English Lit'ure (1 to 2½)
3. Algebra (1½ to 3).
4. Plane Geometry (1)
5. Solid Geometry (½)
6. Trigonometry (½)
7. Physics (1)
8. Chemistry, (1)
9. Physiology (1)
10. Botany (1)
11. Zoology (1)
12. Biology (1)
13. Hygiene (1)
14. Ancient History (1)
15. Med. & Mod. History (1)
16. English History (1)
17. American History (1)
18. Spanish (2 or 3)
19. French (2 or 3)
20. German (2, 3, or 4)
21. Latin (2, 3, or 4)
22. Greek (2 or 3)
23. Freehand Drawing (1)
24. Mech. Drawing (½ or 1)
25. Woodworking (½)
26. Forge (½)
27. Foundry (½)
28. Machine Shop (1)

SUPPLEMENTARY ENTRANCE SUBJECTS

The following entrance subjects will also be recognized from approved schools when the requirements indicated have been satisfactorily fulfilled, or when the candidate has passed the entrance examinations of the institutions named:

Astronomy (½ unit): as outlined at Chicago, Harvard, or Minnesota.

Biblical History and Literature (½ to 1 unit): Chicago.

Civics (½ unit): Chicago, Harvard, Minnesota, or Wisconsin.

Economics (½ unit): Harvard, Kansas, Minnesota, or Wisconsin.

Advanced French (1 unit): California, College Entrance Examination Board, Michigan, Wisconsin.

Architectural Drawing (1 unit): Harvard.

Geometrical Drawing (1 unit): California.

Physical Geography (1 unit); California, Chicago, Kansas, Michigan.

Advanced Physics (1 unit): Columbia, Harvard.

Music (½ to 2 units): College Entrance Examination Board.

Domestic Science (½ to 1 unit).

Commercial Subjects:

(*a*) Bookkeeping and Commercial Arithmetic (½ to 1 unit;

(*b*) Commercial History, Geography, and Law (½ to 1 unit;

(*c*) Stenography; Typewriting; Office Practice; Business Forms, Organization, and Management (½ to 1 unit).

(Credit in Domestic Science and Commercial Subjects to be granted only when these subjects are pursued as part of regular high school courses).

Special Regulations Governing Admission of Women

The Founding Grant of the University, as amended May 31, 1899, directs "that the number of women attending the University as students shall at no time ever exceed five hundred." In conforming to this provision the following plan of admission has been adopted:

Graduates of this University and of universities of equivalent standing will be admitted without previous application.

Women once admitted to the University will be allowed without further application to continue until graduation, or so long as scholarship and conduct are satisfactory. But places will not be held for women students after the regular registration days, except by permission of the Committee on Registration granted in advance.

For the remaining number of women students permitted by the Founding Grant (for August, 1907, approximately 150) the plan of admission is as follows:

Applications may be made at any time. They must state the proposed time of entrance and the credentials which the candidate expects to offer. To insure consideration, applications must be made (or formally renewed) within ten months of the proposed date of entrance. Blanks for application may be obtained of the Registrar.

A numbered list will be begun on the first day of July. Only those candidates will be listed whose credentials are complete (that is, who on examination, or recommendation, or both, have been granted fifteen entrance units). If more than the designated number present complete credentials on this date the order will be determined by following, as far as practicable, the original order of application. After July 1st candidates will be listed in the order of application (accompanied by complete credentials). When two or more are received at the same time, the serial order will be determined in the same manner as before.

On registration day candidates will be preferred in their serial order. After registration day the serial order of candidates actually present will be observed.

Vacancies in January may be filled from a numbered list to be begun on the first day of October preceding. Candidates on the August list, not matriculating at that time, may be entered on the January list in their serial order, provided written request to that effect shall be made to the Registrar on or before October 1st. Additional applications will be considered in the manner used in making up the August list.

Requirements in Particular Subjects

The following will indicate the preparation necessary in the various entrance subjects in the regular entrance group:

1. English Composition

The work in English Composition should be given at least two recitations a week throughout the entire high school course. The greater part of this time should be devoted to practice in writing, but it is recommended that some attention be also paid to instruction in the fundamental principles of formal rhetoric.

The examination is to test the candidate's ability to write exercises not only free from marked deficiencies in spelling, punctuation, sentence structure, and paragraphing, but also indicative of his ability to think consecutively on a simple subject. The subjects which are set at the time of the examination, will be drawn for the most part from the candidate's own experiences. (1½ units)

[A candidate admitted to the University in regular standing without fulfilling the requirement in English Composition will be given an opportunity at the end of his first semester to make good his deficiency. Failing to pass this examination, he will be required to enter at once a special class in English Composition and to remain in it until his work is judged to be of passing grade.]

2. English Literature

The work in English Literature should be given an average of at least three recitations a week throughout the four years of the preparatory course. It should be so conducted as to give the student not only an appreciative understanding of the books selected either for general or for more intensive study, but also a knowledge of their place in the history of English Literature, and especially an ability to read aloud intelligently both prose and verse.

[SPECIAL NOTE. — After January, 1908, the list of books under 2*a* and 2*b* will be that recommended by the College Entrance Examination Board, as announced in their Document No. 30 (for address, see p. 56). Teachers will not find it difficult to make the change from one list to another, the same books, in many cases occurring in both lists]

a. Elementary.—The teacher may make out the course of reading according to the following groups, choosing two or more books from each group as indicated below. Each book counts as one, unless specially designated as one-half.

[Substantial equivalents for any book in the following list will be accepted; but a book so substituted must be taken from standard English Literature, and must be appropriate to the group in which the change is made.]

Group I (choose two).—Shakspere's Merchant of Venice, Julius Caesar, Macbeth; the four Gospels (one book), *or* the equivalent of Old Testament Stories (Modern Readers' Bible Series).

Group II (choose two).—George Eliot's Silas Marner (½); Goldsmith's The Vicar of Wakefield (½); Thackeray's The Newcomes, *or* Henry Esmond; Scott's Ivanhoe, *or* Rob Roy, *or* Quentin Durward; Cooper's The Last of the Mohicans; Hawthorne's House of the Seven Gables.

Group III (choose three).—The Sir Roger de Coverley Papers; Irving's Alhambra, *or* Sketch Book; Hawthorne's Twice Told Tales; Webster's First Bunker Hill Oration; De Quincey's Flight of a Tartar Tribe; Macaulay's Essay on Clive; Macaulay's Essay on Warren Hastings; Carlyle's Essay on Burns.

Group IV (choose four).—Pope's Rape of the Lock; a translation of Homer's Iliad, I, VI, XXII, XXIV; Goldsmith's Deserted Village (½); Gray's Elegy in a Country Churchyard (½); Burns's Tam O' Shanter and Cotter's Saturday Night (½); Byron's Prisoner of Chillon (½); Keats's Eve of St. Agnes (½); Coleridge's Ancient Mariner; Scott's Lay of the Last Minstrel, *or* Lady of the Lake, *or* Marmion; Lowell's Vision of Sir Launfal (½); Tennyson's Geraint and Enid; Macaulay's Horatius (½). (1 unit)

b. Advanced.—Preparation for advanced English Literature should include a brief outline of the progress of English Literature, especially as it is illustrated by the books that have been taken up in class. The books for detailed study should be chosen from the following list. Substitutes cannot, as a rule, be permitted; but if it is desired to omit Group III, one extra book from Group I and two extra books from Group II will be considered an equivalent.

Group I (choose one).—Macbeth; Paradise Lost, Books I and II; portions of the Bible; Spenser's Fancy Queene, Book I, Cantos I, II, and III; Chaucer's Prologue to the Canterbury Tales.

Group II (choose one).—Macaulay's Essay on Clive, *or* on Warren Hastings, *or* on Milton (½), *or* on Addison (½), *or* on Johnson (½); De Quincey's Flight of a Tartar Tribe; Burke's Speech on Conciliation.

Group III.—A series of selected poems by representative English poets, such as is given in any of the following books: Hales's Longer English Poems; Syle's from Milton to Tennyson; Pancoast's Standard English Poems; *or* Gayley and Young's Principles and Progress of English Poetry.

(1 unit)

c. Oral Interpretation.—Candidates who offer *2a* (or *2a* and *2b*) may, at their option, offer *2c* in addition. The examination consists in the reading aloud of passages, both in prose and verse, chosen from the list of books already submitted. Stress will be laid on the candidate's ability to follow and explain intelligently the thought of what is read, and to bring out, to a reasonable degree, the musical quality of verse.

(½ unit)

3. Algebra

a. Elementary.—Algebra through quadratic equations: including the fundamental laws, the laws of exponents for positive and negative integers, formulas of multiplication, the binomial theorem for a positive integral exponent, the transformation of fractions, factoring, common divisors and multiples, radicals, simultaneous equations of the first degree, quadratic equations, the formation of equations with given roots, theory of quadratic equations, and the solution of problems involving the various classes of equations.

Emphasis should be placed upon the methods of factoring, and the solution of equations. Facility and accuracy in the manipulation of algebraic expressions should be attained, as well as an understanding of the meaning of the various operations. The solution of a large number of moderately difficult problems is preferable to the solution of a smaller number of more difficult ones; while the frequent use of problems involving literal expressions serves to impress upon the pupil the generality of algebraic results. (1½ units)

b. Advanced I.—Simultaneous quadratic equations and equtions solved like quadratics; fractional indices; fractional and irrational equations; the extraction of roots of polynomials; arithmetic, geometric, and harmonic series; permutations and combinations. (½ unit)

c. Advanced II.—An additional unit or half unit may be given in Advanced Algebra for a suitable amount of work upon a connected group of the topics usually included under the heading of advanced or higher algebra, such as, the binomial theorem and convergence of series, determinants, the theory of equations, etc. (½ to 1 unit)

4. Plane Geometry

In the teaching of Geometry stress should be placed upon accuracy of statement as well as upon strict reasoning. This end may be promoted by requiring original propositions to be written out in full in a neat and attractive manner. Emphasis should be placed upon clear thinking as well as upon the acquirement of geometrical knowledge.

The requirement in plane geometry includes problems in mensuration of plane figures and original propositions, as well as the usual demonstrated theorems. The following topics are included: the general properties of plane figures; the circle, and the measure of angles; areas; regular polygons, and the measure of the circle. (1 unit)

5. Solid Geometry

The topics included are: relations of lines and planes to space; the properties of prisms, pyramids, cylinders, and cones; the sphere and spherical triangle; also the mensuration of solids, and original propositions. (½ unit)

6. Trigonometry

This subject includes the general formulas of plane trigonometry; the theory of logarithms and the use of logarithmic tables; applications to the numerical solution of triangles and of simple problems in heights and distances. (½ unit)

7. Physics

The equivalent of one year's work in the high school, including both laboratory and text-book work. It is preferred that at least one-half the time be given to laboratory work in which the students perform individually such experiments as are described in the better class of laboratory manuals, of which Hall and Bergen's Physics may be named as an example. Accurate notes of the laboratory work should be kept. The text-book study should cover the ground of some modern text, of which Crew's Physics is a good example.

The desired preparation, both in laboratory and text-book work, is fairly represented by Sanford's Elements of Physics. (1 unit)

8. Chemistry

Besides the usual text-book and recitation work, each student must have a laboratory course in which he performs the experiments for himself. Accurate notes of the laboratory work should be kept. The necessary amount of laboratory work cannot be obtained in less than four hours per week for one school year, in addition to the classroom work. It is preferred that the laboratory work be entirely devoted to illustration of the important facts and principles of general chemistry, rather than partly to analytical chemistry. (1 unit)

Students who receive entrance credit on recommendation, and who wish to continue the study of chemistry in the University, will be admitted at once to the second half of course *a*, and will be required to begin course 1.

9. Physiology

The elements of human physiology and hygiene, the equivalent of Martin's Human Body. The text-book work should be accompanied by experiment, dissection of animals and organs, and a certain amount of study of the tissues with the microscope.

Candidates who have taken only the work in elementary physiology and hygiene done in the grammar or intermediate grades are not prepared to offer the subject for entrance credit. The elementary physiology and hygiene of the grammar grades in this regard, is in the same category as are the other subjects studied in the grammar grades, such as arithmetic and geography, which are assumed as preliminary to the subjects offered for entrance. (1 unit)

10. Botany

The requirements outlined by the College Entrance Examination Board (based on the report of the Committee on Botany of the Science Department of the National Educational Association, modified by a committee of the Society for Plant Morphology and Physiology) may be taken to represent approximately what is expected of the candidate for entrance credit in Botany. These requirements call for a full year's work, of which it is expected that at least two-thirds shall be genuine laboratory work. One-half of the year is to be devoted to the general principles of morphology, physiology, and ecology. In this work proper account should be taken of the lower plants as well as of the flowering plants. The second half-year is devoted to a study of the natural history of representatives of the larger groups of plants, and the principles of classification. This study is expected to include representatives of the algæ, fungi, mosses, ferns, and the principal types of flowering plants. If it seems desirable, the order of the two half-years' work may be reversed or combined in a different way. (Stevens's Introduction to Botany (Heath & Co., 1902) may be mentioned as indicating the scope of the work).

In preparing to meet the requirements in Botany, the main thing to bear in mind is that the work shall be of a practical nature; that the study be mainly specimens and not books. A study of the growth and development of the forms selected is of the highest importance, and should be made a prominent feature in the work.

If possible, the student should be allowed the use of a compound microscope; but when this is not practicable, microscopic demonstrations by the instructor are indispensable. The laboratory work of the students may be supplemented by such explanatory and text-book work as may be deemed necessary; but this must be understood to supplement and not to replace the laboratory work.

Notes and drawings should be neatly made in blank books of moderate size. The paper for the drawings should be white, unruled, hard, smooth, but not glazed. A hard pencil should be used in drawing, and accuracy and neatness are both to be emphasized. The descriptive notes should not be written upon the same sheets as the drawings, and should be clear and concise, including only what the student has himself seen. Notes taken from lectures or reading should be kept entirely apart from the student's own observations.

No credit will be given for an herbarium. The time necessary to prepare an herbarium may be better devoted to a study of the living plants. (1 unit)

11. Zoology

The candidate should possess a knowledge of the structure and relationships of a series of animals, gained primarily through the study of living forms and the dissection of specimens in the laboratory. At least four hours per week for one school year should be spent in actual laboratory work, which should include a study of the following forms, or their equivalent; amœba, paramœcium, hydra, starfish, sea-urchin, earthworm, crayfish, grasshopper, clam, slug, squid, dogfish, pigeon, rabbit. Laboratory note-books, certified by the instructor, should be submitted as evidence of the nature of the work, and should contain a full series of drawings and notes based on original dissections made by the student.

The practical work indicated above should be supplemented by such lectures or reading as will furnish a comprehensive knowledge of the groups studied. As a general reference book Parker & Haswell's Text-book of Zoology (Macmillan & Co., 1897) is recommended. (1 unit)

12 Biology

A course of study and laboratory work extending through one school year, the time divided equally between Botany and Zoology or Botany and Physiology. The character of the work is indicated under the respective statements of Physiology, Botany, and Zoology (subjects 9, 10, and 11).
(1 unit)

13. Hygiene

The requirements in Hygiene are based on adequate instruction in personal hygiene, the hygiene of occupation, and the relation of the citizen to State in matters of sanitation and public health. Only those candidates will be admitted to examination who have graduated from High Schools possessing satisfactory facilities for instruction. The work in elementary Hygiene and "Calesthenics" in the Grammar Schools is not an equivalent. Athletics cannot be substituted for any part of the requirements outlined.

The course should give the student a basis for intelligently meeting his individual problems of health in any environment, rational habits of regular exercise, practical knowledge of general hygiene and sanitation, and familiarity with the real dangers of transmissible diseases, and the methods of controlling them.

Three periods per week of gymnasium instruction and recitation work on Hygiene of the school and the home during the first two years, followed by two recitation periods per week for the third year on Public Health, constitute the minimum requirements in this subject.

The physical training subject should, when practicable, be continued over the whole period of the High School instruction. No single text-book can be suggested, but the Department of Hygiene will furnish a list of approved reference books.

A typical High School course may be outlined as follows:

FIRST YEAR:—(*a*) One recitation per week through the year on the physiology of exercise, and the general conditions conducive to rational results from physical training.

(*b*) Two periods per week of elementary gymnasium work planned for the development of general physique and endurance. At least one period per month should be devoted to regular drills in the preliminary treatment of accidents and emergencies.

SECOND YEAR:—(*a*) One recitation per week on demonstration and prescribed study of personal hygiene and the hygiene of occupation.

(*b*) Two periods per week of gymnasium instruction consisting of corrective drills and apparatus work so planned as to develop co-ordination and prompt adaptation of the body to the demands of unusual positions or situations of danger. One period per month should be given to military marching and drills in "Camp Hygiene."

THIRD YEAR:—(*a*) Two recitations per week on the principles of public health and the hygiene of transmissible diseases. This should consist of text-book work and carefully planned demonstrations and field work. The class as a whole should construct a sanitary map of the community.

(*b*) Gymnasium work should be elective, but where possible special co-ordination work, as in fencing, wrestling, swimming, should be given by the instructor to those electing the work. Regular exercise in some form throughout the third and fourth years should be encouraged as a factor in the evidence for recommendation. (1 unit)

14-17. History

All candidates for credit in entrance History must submit evidence of considerable work done in addition to the text-book preparation. For the sake of the training involved, as well as for the information acquired and the stimulating of interest, the following exercises are recommended: Supplementary reading, including the use of original material where possible; notes and digests of reading; abstracts or analyses of specified chapters, both of the text-book and supplementary reading; outlines of subjects, gathering material from all available sources; map drawing from printed data or comparison of existing maps, showing movements of exploration, migration or conquest, territorial changes, or social phenomena.

Such work should be regarded as a means rather than the end of historical study, and in every instance should be adapted in character and amount to the stage of advancement of the class and of the individual pupil. As the pupil progresses in his study, more advanced work may well be required in the form of historical composition, and of note-taking in the class from talks by the teacher or reports of fellow pupils.

The evidence of such work may be presented in the form of a note-book or bound collection of notes, containing all exercises prepared upon any of the four history subjects arranged in order of their assignment and certified and approved by the teacher. In the case of schools whose recommendations are accepted in place of the examinations, a detailed statement by the teacher as to the character, amount, and quality of the work of each candidate may be submitted in place of the note-book itself.

14. Ancient History

Text-books: *The Oriental Nations*—Myers, General History, pp. 1-86; or West, Ancient History, pp. 1-75; or an equivalent. *Greece*—Botsford, History of Greece; or Myers, History of Greece; or Morey, Outlines of Greek History; or Oman, History of Greece; or West, Ancient History; or the equivalent. Rome—Botsford, History of Rome; or Myers, Rome; or West, Ancient History; or Morey, Outlines of Roman History; or an equivalent.

For supplementary reading and reference: Botsford, Story of Rome; Munro, Source Book of Roman History, "Epochs of Ancient History" Series; Wolfson, Essentials in Ancient History; Cox, General History of Greece (Student Series); Pelham, Outlines of Roman History; Abbott, Roman Political Institutions; Shuckburgh, History of Rome; Ginn & Co.'s Classical Atlas, or Kiepert, Classical Atlas; Tozer's Primer of Classical Geography. See, also, Historical Sources in Schools, and A History Syllabus for Secondary Schools. (1 unit)

15. Mediæval and Modern History

Text-books: Myers, Mediæval and Modern History; or Robinson, History of Western Europe; or, Harding, Essentials in Mediæval and Modern History; or the equivalent.

For supplementary reading and reference: Robinson, Readings in European History; West, Modern History; Duruy, History of the Middle Ages; Adams, Civilization During the Middle Ages; Bemont and Monod, Mediæval Europe; Munro and Sellvry, Mediæval Civilization; Fyffe, History of Modern Europe (Popular Edition); Seignobos, Political History of Europe since 1814; the "Epochs" Series; University of Pennsylvania, Translations and Reprints; Fling, Studies in European History; Putzger, Historischer-Schul-Atlas. See, also, Historical Sources in Schools. (1 unit)

16. History of England

Text-books: Andrews, History of England; or Coman and Kendall, History of England; or Cheyney, A Short History of England; or Gardiner, Student's History of England; or Ransome, Advanced History of England; or Larned, History of England; or Oman, History of England; or Walker, Essentials in English History; or Wrong, History of the British Nation; or Terry, History of England; or an equivalent.

For supplementary reading and reference: Bright, History of England; "Epochs" Series; Green, Short History of the English People; Traill, Social England; Larned, History for Ready Reference; Porritt, The Englishman at Home; Adams and Stephens, Select Documents of English Constitutional History; Colby, Sources of English History; English History Illustrated from Original Sources; Kendall, Source Book of

English History; Translations and Reprints; and Gardiner, School Atlas of English History. Desirable references are to be found in Andrews, Cheyney, Coman and Kendall, Larned, and Wrong. See, also, Historical Sources in Schools; A History Syllabus for Secondary Schools, and Reference Books recommended by the University of Wisconsin.

(1 unit)

17. American History

Text-books: McLaughlin, History of the American Nation; or Channing, Students' History of the United States; and Ashley, American Government; or Hinsdale, American Government; or Clark, Outlines of Civics, and Bryce, American Commonwealth (abridged edition); or equivalents.

For supplementary reading and reference: "Epochs of American History" Series; the "American History" Series; Hart, American History Told by Contemporaries; MacDonald, Select Charters, Select Documents, and Select Statutes; and McCoun, Historical Geography of the United States. See, also, Historical Sources in Schools. (1 unit)

18-19. Spanish and French

The requirements in Spanish and French are the equivalent of those recommended by the Committee on College Entrance Requirements of the National Educational Association.

The Elementary study of the languages, covering two years of daily recitations, should lay stress on the following points: 1. An accurate knowledge of the forms of the languages including the inflections, conjugations, and principal parts of verbs. Particular attention should be devoted to this part of the subject; constant drill in the verbal inflections, both written and oral, and dictation exercises of various kinds, are recommended. 2. The elements of syntax, such as the uses of the article, the personal pronouns, the subjunctive, the partitive constructions, and the agreement of the participles. 3. The ability to turn easy English prose into French or Spanish. 4. The ability to translate ordinary French or Spanish into idiomatic English. 5. The ability to pronounce French and Spanish correctly. It is believed that a fairly good pronunciation can be obtained in the fitting schools, if the necessary time is devoted to the subject. Pronunciation should be studied both theoretically and practically, and the characteristics of vowel qualities, of stress, pitch, and intonation should be pointed out.

The Intermediate requirements are intended to represent a third year of daily recitations. The specific demands are:

1. A thorough knowledge of modern French and Spanish syntax. 2. The ability to turn modern French and Spanish at sight into idiomatic English. 3. The ability to translate connected English prose into French or Spanish. 4. The ability to write French or Spanish from dictation.

For all grades the examination will include a test of pronunciation and the writing of French or Spanish from dictation.

The reading in the Elementary course should cover from four hundred to six hundred duodecimo pages; in the Intermediate requirements a similar amount should be read of prose and verse, a portion to be in the dramatic form. No definite text-books are prescribed, but the books named below will be found adequate for the mastery of these requirements.

18. Spanish

a. Elementary.—Hills and Ford's Spanish Grammar (Heath & Co.), or Garner's Spanish Grammar (American Book Co.); Ramsey's Elementary Spanish Reader (Holt & Co.); Matzke's First Spanish Readings (Heath & Co.); Tamayo y Baus, Un Drama Nuevo (Jenkins, New York); Valdés, José (Heath & Co.); Alarcón, El Capitán Veneno (Heath & Co.). (2 units)

b. Intermediate.—Ramsey's Elementary Spanish Text-book (Holt & Co.); Ramos y Vital, Zaragueta (Silver, Burdett & Co.); Caballero, La Familia de Alvareda (Holt & Co.); Alarcón, El Niño de la Bola (American Book Co.); Moratín, El Si de las Niñas (Ginn & Co.); Echegaray, El Gran Galeoto (Koehler, Boston). (1 unit)

19. French

a. Elementary.—Fraser & Squair's French Grammar and Reader, Part I (Heath & Co.), or Whitney's Practical French Grammar, Part I (Holt & Co.), or Grandgent's Essentials of French Grammar (Heath & Co.), or Chardenal's Complete French Course (Allyn & Bacon), or François' Beginners' French (American Book Co.); Super's French Reader (Heath & Co.), or Aldrich & Foster's French Reader (Ginn & Co.), or François and Giroud's Simple French (Holt & Co.); Dumas, La Tulipe Noire; Halévy, L'Abbé Constantin; Labiche, Le Voyage de Monsieur Perrichon; Mérimée, Colomba. For the study of pronunciation, Matzke's Primer of French Pronunciation (Holt & Co.) is recommended. (2 units)

b. Intermediate.—Fraser & Squair's French Grammar and Reader, Part II (Heath & Co.), or Whitney's Practical French Grammar, Part II (Holt & Co.), or Edgren's Compendious French Grammar ((Heath & Co.), or François' Advanced French Composition (American Book Co.); George Sand, La Petite Fadette; Balzac, Eugénie Grandet; Victor Hugo, Hernani (Heath & Co.); Fontaines, Historiettes Modernes (Heath & Co.). (1 unit)

20. German

The requirements in German are essentially those recommended to the National Educational Association by its Committee on College Entrance Requirements.

All candidates should present a statement from their former teachers of the amount of German read and the textbooks used.

a. Elementary.—The ability to translate easy German prose and verse at sight; an accurate knowledge of the most important elements of grammar, embracing especially inflections, word-order, and the essentials of syntax, as also the ability to appreciate the force of prefixes and suffixes; the ability to translate easy prose from English into German; the ability to make oral use of the German learned and to recognize German words and simple sentences when spoken. Careful attention should be given to pronunciation and accentuation, in order to insure the power to read German fluently and intelligently.

This preparation is represented, approximately, *in reading,* by material of the character of Thomas and Hervey's Reader, and the careful study of one or more modern dramas (about two hundred duodecimo pages of easy German), supplemented by the reading of German lyrics and ballads, a number of which should be memorized; *in composition,* by an amount equivalent to the first twenty-six exercises in Harris's German Prose Composition. These exercises, the original work done by the student, followed by the corrected work approved by the teacher, should be written in ink and preserved for inspection by the Department. (2 units)

b. Intermediate.—The ability to translate ordinary German prose and verse at sight; some knowledge of word-formation and derivation; practical familiarity with the principles of syntax, with special reference to the uses of the tenses and cases, the modal auxiliaries, and the moods; the ability to translate into German simple connected English prose.

It is believed that this preparation can be acquired by the careful reading of five hundred duodecimo pages of contemporary and classical prose and verse, in addition to the reading required for Elementary German. It is recommended that about one-half of this reading be selected from the works of living or recent writers, such as Otto Ernst, Storm, Keller, Freytag, etc.; and the other half from such classics as Lessing's Minna von Barnhelm, Schiller's Wilhelm Tell, and Goethe's Wahrheit und Dichtung.

It is further recommended that particular attention be paid to the literary value of the works read. The preparation in translation from English into German should be the equivalent of what is represented by the first fifty pages of Jagemann's German Prose Composition. This work should be preserved in the manner suggested under Elementary German. It is also desirable that candidates should acquire the ability to understand and take part in a recitation conducted in German. (1 unit)

c. Advanced.—A fourth unit in German may be given to candidates who fulfil, in addition to the preparation required in Elementary and Intermediate German, the following requirements: A firmer hold on the important elements of German grammar; a thorough knowledge of at least two of the following classics: Goethe's Hermann und Dorothea or his Iphigenia, Lessing's Nathan der Weise, and Schiller's Wallenstein, as well as of two or more recent dramas, all of which should be studied as much as possible with an eye to the appreciation of their literary value; some familiarity with the technical language of literature and science; the ability to compose in German with ease and to follow lectures delivered in German. (1 unit)

21. Latin

All candidates should present a statement from their former teacher of the amount of Latin read and the text-books used.

a. Elementary.—The requirements for Elementary Latin are as follows: 1. An accurate knowledge of the ordinary forms of the language. 2. The ability to pronounce Latin so as to observe the proper quantity of vowels. 3. A familiarity with the ordinary rules of syntax. Particular attention should be devoted to these three points. 4. The ability to translate easy Latin prose into English. 5. The ability to turn simple English sentences into Latin.

For 1907-08 the examinations in translation will be based on the first four books of Cæsar's Gallic War, but approved schools may use an equivalent Latin text, and are recommended to increase the amount of reading indicated. Some attention should also be paid to translation at sight from easy prose. (2 units)

b. Advanced.—The requirements for Advanced Latin include those for Elementary Latin, together with the following: 1. Continued training in Latin forms and syntax. 2. Knowledge of the rules of prosody, and ability to scan Vergil's hexameters. 3. The ability to translate from Cicero's Orations. 4. Careful preparation of the first, second, fourth, and sixth books of Vergil's Aeneid, with less detailed knowledge of the third and fifth books. 5. The ability to turn into Latin connected English of simple style.

For 1907-08 the examinations in translations will be based on the Vergil assigned and on Cicero's Orations against Catiline, for Archias, and for the Manilian Law; but approved schools may use any equivalent Latin prose text, and are recommended to add Sallust's Catiline and other speeches of Cicero to the minimum given above. All schools should pay some attention to the translation of prose at sight, and the examination will include a passage from Cicero to test the ability of candidates in this respect. Credit in Advanced Latin is distributed as follows: Cicero, ½ unit; Vergil, ½ unit; Third-year Composition, ½ unit; Fourth-year Composition, ½ unit. (2 units)

22. Greek

a. Elementary.—Grammar, the inflections, the formation of words, and the essential points of syntax; Xenophon's Anabasis, Books I-IV, or an equivalent; prose Composition (Collar and Daniell's text-book is recommended); translation at sight of easy prose. It is expected of every student that he be able to read Greek aloud without stumbling. (2 units)

b. Advanced.—Homer, Iliad, Books I-III, or an equivalent; advanced prose composition. The candidate must show a thorough acquaintance with the forms and syntax of Homer, and must be able to scan any given passage exactly and to read it rythmically. In the writing of Greek the candidate should have a year's training beyond that required in Elementary Greek. (1 unit)

23. Freehand Drawing

The satisfactory completion of a course of instruction in freehand drawing which represents two hundred and forty hours of work.

Preparatory drawing should stimulate appreciation for the best pictorial and applied art as well as give training in the technique of representation.

Instruction in applied art should include exercises in harmony of color as applied to room and furniture decoration and to dress; and the study of plant forms as adapted to decoration in some of the multiple every-day uses, as in calendars, announcement cards, programmes, advertisements, magazines and the printing art, etc.

Representation should include the ability to represent groups of two or three colored objects, such as dishes, books, vegetables, machine parts, shells, leaf sprays and other organic forms. Representation of these should include knowledge of the appearance in both *shapes of contours* and in *light and shade.*

The style of drawing should be direct, facile and effective, adapted to the thing drawn, with refinement in its proper place and vigor in its proper place. The candidate should be equally familiar with the use of pencil and charcoal or brush.

For the present, entrance credit will be given for a sufficient attainment in representative ability; but when this alone is offered a higher standard of skill must be attained, than when the instruction covers a broader field.

The candidate for examination should provide the kind of paper and materials which he is accustomed to use.

(1 unit)

24. Mechanical Drawing

Full unit credit equivalent to about two hundred and fifty hours of work under instruction.

The candidate is expected to have acquired neatness and accuracy in the use of drawing instruments. His course should have included practice in line work, lettering, machine or architectural working drawings, and tracing; recognition, commensurate with the length of course and the degree of proficiency attained in the use of instruments, will be given, however, to those courses consisting of line work, lettering, and the construction of geometric figures. He should present for inspection as much of his work as is possible, duly certified by his teachers. As an examination the candidate may be called upon to make a simple drawing of some specified object; he should provide his own material for the examination, as follows: T-square, triangle, instruments, pencils, eraser, scale, thumbtacks, and sheet of drawing paper not smaller than 12x18 inches. (½ or 1 unit)

25-28. Shopwork

Two things will be expected of candidates for entrance credit in these subjects; first, manual dexterity, as evidenced by neatness, accuracy, and dispatch in the execution of a given piece of work; second, a knowledge of the materials and tools used, and a thorough understanding of the principles involved in the operations.

Candidates who have been trained in manual training schools or in commercial shops should present letters from their teachers or employers stating clearly and in some detail the time they have been employed, the kind of work they have done, and its quality. The examination may be oral, written, the actual execution of a set piece of work, or all combined. In each subject the ability to read and follow a working drawing is expected.

25. Woodworking

The ability to recognize the common varieties of wood and some knowledge of their physical properties, such as ease of working, strength, toughness, hardness, etc., is expected

Candidates must be familiar with the uses of the principal hand tools of carpentry and with their care. They should be able to make the ordinary kinds of joints and splices. They should be familiar with the operation of the lathe, jig-, band-, and circular-saws, and planing machines.

Equivalent to about two hundred hours of work under instruction in a manual training school, or a year in a commercial shop. (½ unit)

26. Forge Work

This demands an elementary knowledge of the properties of wrought iron and steel, and of the proper heats at which to work them. The management of forge and fire and the nature and uses of all the ordinary blacksmithing tools should be known. The candidate must be able to execute all of the common forging processes, including the various forms of welds in iron and steel; he is also expected to understand hardening, tempering, and annealing.

Equivalent to about two hundred hours of work under instruction in a manual training school, or a year in a commercial shop. (½ unit)

27. Foundry Work

The candidate should have a knowledge of the tools and processes used in the ordinary forms of green sand moulding and core work. He should be familiar with the cupola and know how to charge and operate it. He must have a knowledge of the properties of cast iron, and should have had experience in pouring cast iron as well as in moulding.

Equivalent to about two hundred hours under instruction in a manual training school, or a year in a commercial foundry. (½ unit)

28. Machine Shop

A knowledge of the tools and processes used in the working of iron, steel, and brass is demanded of the candidate. He should be able to execute all forms of vise-work, such as chipping, filing, scraping, fitting, and finishing. He must be familiar, through experience in operation, with the simpler forms of machine tools, such as the lathe, drilling machine, planer, shaper, and milling machine.

Equivalent to about four hundred hours under instruction in a manual training school, or two years in a commercial shop. (1 unit)

A. ENTRANCE CREDIT ON EXAMINATION

Examinations in all subjects in the regular entrance list will be held by the University in August, 1907, and in January, 1908. An examination in English Composition will also be held in May, 1907. After these dates examinations will be held in August-September only.* Special examinations outside of the regular examination days will not ordinarily be granted. In exceptional cases such examinations may be arranged by the Committee on Admission; but a special fee of two dollars will be charged the candidate for each subject in which examination is taken.

Entrance examinations are held in the following order (for dates, see p. 5):

First Day:—Elementary Algebra, 8:15; Advanced Algebra, American History, 10:15; Plane Geometry, Botany, 1:30; Solid Geometry, Mediæval and Modern History, 3:30; Trigonometry, 4:45.

Second Day:—Physiology, Elementary French, 8:15; English Composition, 10:15; Chemistry, Intermediate French, 1:30; Hygiene, English History, 3:30.

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*Candidates desiring examinations at the close of the school year are advised to take the June examinations of the College Entrance Examination Board. In 1907 these examinations will be held June 17-22.

All applications for examination must be addressed to the Secretary of the College Entrance Examination Board, Post Office Sub-Station 84, New York, N. Y., and must be made upon a blank form, to be obtained from the Secretary of the Board upon application. Applications for examination at points in the United States east of the Mississippi River, also at Minneapolis, St. Louis, and other points on the Mississippi River, must be received by the Secretary of the Board on or before Monday, June 3, 1907; applications for examination elsewhere in the United States, or in Canada, must be received on or before Monday, May 27, 1907; and applications for examination outside the United States and Canada must be received on or before Monday, May 13, 1907. Applications received later than the dates named will be accepted when it is possible to arrange for the examinations of the candidates concerned, but only upon the payment of $5 in addition to the usual examination fee.

The examination fee is $5 for all candidates examined at points in the United States and Canada, and $15 for all candidates examined outside of the United States and Canada. The fee (which cannot be accepted in advance of the application) should be remitted by postal order, express order, or draft on New York to the order of the College Entrance Examination Board.

A list of the places at which examinations are to be held by the Board is published about March 1st of each year. Requests that the examinations be held at particular points, to receive proper consideration, should be transmitted to the Secretary of the Board not later than February 1.

In these examinations 60 will be considered as the lowest passing grade.

The examination questions set by the College Entrance Examination Board are published in yearly volumes by Ginn & Co., Boston.

Third Day:—Physics, Elementary Spanish, 8:15; Intermediate Spanish, Elementary German, 10:15; Elementary English Literature, Zoology, Intermediate German, 1:30; Advanced English Literature, Advanced German, 3:30.

Fourth Day:—Elementary Latin, Mechanical Drawing, 8:15; Biology, Advanced Latin, 10:15; Elementary Greek, 1:30; Ancient History, Advanced Greek, 3:30; Freehand Drawing, Woodworking, Forge, Foundry, Machine Shop, by appointment, throughout the day.

The examinations in entrance subject *2c* (Oral Interpretation of English Literature) are held during the first two days of the examination period; but appointments must be made during the forenoon of the first examination day, unless arranged in advance by letter or otherwise. [Correspondence regarding appointments should be addressed to Prof. L. E. Bassett, Stanford University, Cal.]

Candidates are not required to take all the examinations at one time; but (unless following graduation from an approved school) account will not ordinarily be taken of an examination passed more than sixteen months before the proposed time of entering.

Satisfactory passing grades obtained in the regular entrance examinations of institutions of equivalent rank, or of the College Entrance Examination Board, will be accepted in subjects corresponding to those outlined in the entrance list.

B. ENTRANCE CREDIT WITHOUT EXAMINATION

I. On Fulfilling Particular Requirements

1. Full undergraduate standing, without further tests, will be granted as follows:

(*a*) To graduates of approved preparatory schools whose credentials are otherwise satisfactory and who are specially recommended for distinguished scholarship or exceptional intellectual promise.

(b) To holders of sixty-count Diplomas issued by the Regents of the University of the State of New York. (Applicable only to Diplomas issued before June 1, 1906. Only seventy-two count Diplomas will thereafter be included in this provision, and beginning with June, 1909, only diplomas granted *with credit, with great credit,* or *with highest credit.*)

(*c*) To recommended graduates of the California State Normal schools, and to graduates of other Normal Schools approved by the California State Board of Education as of equal rank with the State Normal Schools of California, who are holders of the highest grade diploma issued by these Normal Schools. (For conditions on which advanced standing may be granted Normal School graduates, see p. 62.)

(*d*) To candidates from Japan as follows: (1) to matriculates of the Imperial Universities of Tokyo and Kyoto; (2) to graduates of the Sapporo Agricultural College, the Higher Commercial School, Doshisha College, and Keiogijiku College; (3) to graduates of the eight Higher Schools (Koto-gakko), the two Higher Normal Schools, the Girls' College, and the Girls' Higher Normal School. But before admission to the University such candidates must show ability to use and to understand readily both written and spoken English; if coming directly from Japan they must ordinarily expect to spend at least one year in an American preparatory school, or under special instruction in English, before being able to meet this test.

(*e*) To candidates from Mexico, as follows: (1) to graduates of the Military School, the Normal School, the National Preparatory School, and other preparatory schools (maintaining six-year courses), whose credentials show satisfactory passing grades. But before admission to the University such candidates must show ability to use and to understand readily both written and spoken English; if coming directly from Mexico they must ordinarily expect to spend at least one year in an American preparatory school, or under special instruction in English, before being able to meet this test.

2. As a substitute for the examination in English Composition, an exercise book may be submitted according to the following regulations: The book must contain at least six compositions of about 250 words each, written in class and not corrected by the teacher, two of the compositions expository in nature, and not more than two of them to be on subjects drawn from the pupil's reading. These compositions must be written without any aid whatever, and upon topics assigned by the teacher; they must remain in the custody of

the teacher until submitted to the University, and must be submitted exactly as written. They must be accompanied by blanks, to be obtained from the Registrar, properly filled out and signed by the teacher. To be acted on in August, the books must be in the hands of the Registrar by August 20th; to be acted on in January, by December 30th; to be acted on in May, by May 1st.

II. On Recommendation from Approved Schools

The University will receive recommendations from preparatory schools accredited:

(A) By (1) the New England College Entrance Certificate Board, (2) the North Central Association of Colleges and Secondary Schools, (3) colleges and universities of recognized standing;

(B) Upon inspection undertaken or authorized by the University (such inspection to be temporarily waived in the case of schools which have sent five or more pupils to the University and whose graduates have made satisfactory records in the University).

Entrance credit will be granted on recommendation of the principal, provided: (*a*) the school maintains a full four-years' course of high school work; (*b*) the candidate has completed the full course and has been duly graduated after at least one year's attendance; (*c*) the time given to the subject and the amount of work covered is substantially as indicated in the outline of entrance subjects (pp. 36-56); (*d*) the grade of work is satisfactory (ordinarily not less than ten per cent above the lowest passing grade: but lower passing grades in a particular subject or subjects may be offset by a general high average or by decided intellectual promise); (*e*) the personal qualities and habits of the candidate are such as to commend him to the University authorities.

It is the purpose of the University to emphasize (1) quality of preparation and intellectual promise; (2) personal character and seriousness of purpose. Principals are expected to exact a high standard of scholarship as preliminary to recommendation, and to withhold recommendation from those who are undesirable or unpromising from the point of view of moral qualities or habits.

Recommendations will be considered at any time of the year, but, since, in general, candidates cannot be assured of admission to the University without examination in one or more subjects, it is important that recommendations be forwarded as early as possible.

Blanks for admission on recommendation may be obtained from the Registrar.

II. AS SPECIAL STUDENTS

Persons under twenty-one years of age will not be received as special students.

Persons under twenty-five years of age, not graduates of some approved high school or equivalent preparatory school, will be admitted only upon passing entrance examinations in subjects aggregating at least five units. The candidate may usually select the subjects in which examinations shall be taken, but engineering students must include elementary algebra and plane geometry.

The privileges extended to special students are not intended for those who come directly from the schools, with insufficient preparation for regular standing, but for those who are qualified by age, character, practical experience, and habits of study to profit by university courses. (On account of the limitation upon the number of women students, women are not admitted as special students.)

Special students are subject to the same University regulations as regular undergraduates, and they may become candidates for graduation upon fulfilling all University requirements (see p. 67).

A failure on the part of any special student to maintain a good standing in the studies to which he is admitted will at once sever his connection with the University; and a special student suspended for failure in University work may be readmitted only upon attaining regular undergraduate standing.

Blank applications for admission as special students may be obtained from the Registrar.

III. TO ADVANCED STANDING

Students from other institutions of recognized collegiate rank, who present letters of honorable dismissal, may be admitted to such standing and upon such terms as the Faculty may deem equitable. Students from institutions of equivalent rank, who maintain a satisfactory record after admission, may expect to receive the same standing as at the former institution, except that no such student can be given more than three years' advanced credit (ninety unit-hours toward graduation), and that differences in standard of entrance preparation will be taken account of. Every candidate is required to present, along with a catalogue of the institution in which he has studied, a full statement, duly certified, of the studies he has completed, including studies passed or credited at entrance.

Recommended graduates of approved State Normal Schools where the normal training has been preceded by a full four years' high school course, or where high school and normal school courses together cover six years' work, may be granted an advanced credit of not more than thirty units.

Blank applications for admission to advanced standing may be obtained from the Registrar.

All applications for advanced standing on the basis of work done before entering the University must be filed within two years after matriculation; and such applications will not be received at a later date.

IV. TO GRADUATE STANDING

Graduates of this University, and of other institutions of recognized collegiate rank, may be admitted to graduate standing in the University upon presentation of diplomas or equivalent credentials. Admission to technical graduate standing does not imply admission to candidacy for an advanced degree (for the conditions of such candidacy see p. 75). If graduates of other universities desire to become candidates for the baccalaureate degree, the question of units required for graduation may be waived, upon approval of the Committee on Admission and Advanced Standing, and the degree conferred on the satisfactory completion of not less than thirty units of University work and the fulfilment of all major and minor requirements. Graduate students not candidates for any degree, may be permitted, upon the approval of the major department, to undertake such work as their previous training seems to warrant.

UNIVERSITY RESIDENCE

Registration

On the appointed Registration Days, in August and January, each student must obtain a certificate of registration *in person*, at the Registrar's office.

Matriculated students may register after the appointed Registration Days and during registration week, upon payment of a special fee of two dollars; during the week following the fee for late registration will be four dollars; after that the fee will be increased one dollar for each week's delay. Registration of undergraduates and specials will not be permitted later than one month after the beginning of instruction.

Study Card

At the Registrar's office the student receives a card for selection of studies for the semester. This card, properly filled out, and approved by the major department, must be filed with the Registrar not later than the Friday following Registration Day; but late study cards will be accepted upon payment of a special fee of two dollars. Students registering after the Friday of registration week, must have their study cards indorsed by all the instructors under whom work is taken. All work for which University credit is desired must be duly registered.

Enrollment in Classes

A student desiring to enter any class must present his certificate of registration to the instructor for enrollment at the beginning of each semester. Whether the student is qualified for enrollment in any particular class is a question to be decided by the instructor in charge. In general, the prerequisites for taking any given course are noted under "Courses of Instruction."

Change of Studies

A student desiring to drop a subject once taken up, or to take up a new subject after the study card has been filed, must present to the Committee on Registration a petition for such change, approved by the major department and by the instructors whose subjects are to be taken or dropped. In general, petitions so approved, if they do not give the student too many unit-hours, or too few unit-hours, and if presented within one month after the beginning of the semester, are granted without question. If presented at a later time in the semester they will be granted only for extraordinary reasons, and, where the taking up of new subjects is involved, only on payment of a special fee of two dollars for each course; if otherwise acceptable but presented after the close of the semester, they will be granted only on payment of a special fee of four dollars for each course. In the case of petitions to drop subjects during the last six weeks of the semester, action will be deferred until the close of the semester.

Change of Major Subject

Petitions to change the major subject will be granted when approved by the departments in charge of both the old and the new subjects, the student being held to all the requirements of the new major subject. (First-year students may change their major subject at the end of the first or second semester without petition.) In general, the major subject may be changed at the end of the first year, and in some cases later, without appreciable loss of time to the student.

Amount of Work

Fifteen hours per week of recitations or lectures or an equivalent in laboratory work, constitutes an average semester's work. In general, students may register for as few as *thirteen* or as many as *eighteen* unit-hours; but in the case of students doing outside work for self-support or otherwise, and where considerations of health are involved, special restrictions will be made upon recommendation of the professor of hygiene; and where conditions or failures have been incurred in the preceding semester, not more than *fifteen* units may be registered unless by special permission of the Committee on Registration granted in advance. Permission to register for less than *thirteen* units may also be granted for special reasons; but registration for less than *ten* units will not ordinarily be accepted. Not more than eighteen units may be credited toward graduation for any semester's work. Graduate students are not held to any special number of unit-hours, but registration will not ordinarily be permitted unless such students are prepared to devote at least half of their working time to University study. Petitions for irregular registration should be presented at the beginning of the semester.

Every unit for which credit is given is understood to represent approximately, for the average student, three hours of actual work per week, through one semester. Thus, in lecture or recitation work, for one unit of credit one hour per week may be allotted to the lecture or recitation and two hours for preparation or subsequent reading and study on the part of the student; but if a less amount of time is allotted for preparation or subsequent reading or study, there shall be a proportionate decrease in the amount of credit. Where the time is wholly occupied with drawing, field, or laboratory work, or in the class-room work of conversation classes, three full hours per week through one semester are expected of the student for each unit of credit; but where such work is supplemented by systematic outside reading or experiment under the direction of the instructor, such a reduction may be made in the actual drawing, field, laboratory, or class-room time as seems just to the department concerned.

Conditions and Failures

A student conditioned in any subject may arrange with the instructor concerned for such supplementary examinations or study as will make good the deficiency; but such deficiency must be removed within one year after the condition is incurred, otherwise the condition will be considered a failure. Work reported as incomplete may be made up during the first or second semester's registration after the incomplete is incurred; but if not made up until the second semester, the incomplete work shall be duly entered on the student's study card and shall count as part of the permitted registration for that semester to the extent of the actual unit-hours required for making up such incomplete work as estimated by the instructors concerned. A student failing in any subject cannot receive credit for the portion in which the failure is incurred until the subject has been re-registered and taken over again in class. A condition or failure or withdrawal from class without permission of the Committee on Registration, limits the student to *fifteen* units the semester following.

Mid-semester reports on scholarship are obtained from all instructors, and students reported as doing unsatisfactory work are notified of their deficiencies. A student whose work is unsatisfactory may be placed on probation, and may be required to withdraw at any time thereafter if satisfactory improvement is not shown.

A student who at the end of his first semester receives passing grades in less than half the work for which he is registered thereby forfeits his membership in the University and will be required to withdraw for the period of one semester, unless by reason of illness or other disability such action may be modified by the Committee. A first-semester student whose deficiencies are serious, but involving not more than half of the work registered, will receive notice of the unsatisfactory nature of his work and be placed on probation for the period of one semester. At the end of any subsequent semester a student who receives passing grades in less than two-thirds of the work for which he is registered thereby forfeits his membership in the University and will be required to withdraw for the period of one semester, unless by reason of illness or other disability or previous good record, such action may be modified by the Committee. In this connection work marked "incomplete" will be considered of passing grade only when reported as satisfactory in quality and not seriously deficient in quantity.

A student re-entering the University after a period of compulsory withdrawal may take tests to remove "incompletes" and "conditions" incurred during his last semester, but no credit will be granted for any other work accomplished during the period of withdrawal, except after removal of "incompletes" and "conditions" and on special examination by the departments concerned. A student so re-entering will be placed on probation for one semester. In case of a second failure withdrawal from the University will be permanent, unless, under extraordinary conditions, a further trial may be granted by the Committee. During the period of compulsory withdrawal a student may not attend University exercises, nor remain in residence at the University, except by special permission of the Committee.

A first application for leave of absence for the remainder of any collegiate year will not be refused on the ground of delinquent scholarship; but a student seriously deficient in scholarship at the time of taking such leave will be placed on probation on returning to the University and a subsequent compulsory withdrawal will be permanent, unless, under extraordinary conditions, a further trial may be granted by the Committee. No credit will be granted for work done during the semester in which leave of absence is taken. Application for leave of absence under the above conditions will not be granted during the last six weeks of the second semester; nor at any time to students who have previously been under compulsory withdrawal on account of delinquent scholarship.

A student on probation may not take part in any intercollegiate contest, nor represent the University in any way, whether individually or in connection with any athletic, literary, musical, dramatic, or other organization.

From Special to Regular Standing

Special students may be entered in regular standing and become candidates for graduation, on passing examinations in the required number of entrance subjects, provided such examinations are passed not later than two years after matriculation. In place of entrance examinations, university work to the amount of five units for each entrance deficiency may be offered in university subjects which are also included in the entrance group.

A special student who has completed one hundred and fifty units of university work, including all major requirements, and whose general university record is deemed proof of superior scholarship, may become a candidate for graduation on approval of the Committee on Admission and Advanced Standing. Petitions to this end will not be considered by the Committee until after the student has completed one hundred and twenty units of university work.

University Credit for Extra Entrance Subjects

Credit toward graduation may be given for entrance subjects in excess of the number required for admission, provided such extra entrance subjects are also university subjects, and are successfully continued in the University within two years after matriculation, and provided the student's general University record is deemed proof of superior scholarship. In general, three units of advanced credit will be granted for each extra entrance unit representing elementary work in a given subject, and five units of advanced credit for each extra entrance unit representing advanced work. Applications for such university credit must be made within two years after matriculation. After matriculation additional entrance units may be offered only for the purpose of making up entrance deficiencies.

University Credit for Special Courses

University credit is given only for work done in residence at the University. Work prescribed by any professor of such a nature that it cannot be done at the University or can be more advantageously done elsewhere may be regarded as work done in residence. But such special work must be duly registered in advance.

Matriculated students on leave of absence may take work in other universities, usually without any restrictions other than those imposed by the university in question. But work undertaken in any Summer Session may be subject to special regulations, and must be approved in advance by the major department and by the department in which the work is to be taken; and the last semester's work of every candidate for a degree must be taken in this University.

Advanced Standing

Advanced standing for work done before matriculation will generally be given only when certified as having been completed in some institution of recognized collegiate rank, except as provided above (p. 67) for extra entrance units, or, in particular cases, to recommended graduates of approved State Normal Schools (see p. 62). But in special cases permission may be given by the Faculty to receive credit on examination for work equivalent to regular University courses. Application for such examinations, with satisfactory evidence of the work accomplished, must be presented to the Committee on Advanced Standing. Applications for advanced standing on the basis of work done before entering the University must be made within two years after matriculation.

Leave of Absence

A student desiring to leave the University for a brief time should apply to the Committee on Registration. If leave of absence is desired on account of sickness, the petition must be indorsed by the professor of hygiene. A leave of absence is merely a justification of the absence and not a relief from the work that has been missed. A leave of absence is usually necessary only in case of interrupted work; a student in good standing absent one or more semesters may re-enter at the beginning of any semester without formal petition.

Honorable Dismissal

An honorable dismissal means that the student is permitted voluntarily to withdraw from the University and is commended to the favorable consideration of any institution he may wish to enter. An honorable dismissal may be granted upon written application to any student not under discipline for misconduct.

Conduct of Students

In the government of the University the largest liberty consistent with good work and good order is allowed. Students are expected to show both within and without the University such respect for order, morality, personal honor, and the rights of others as is demanded of good citizens. Failure to do this will be sufficient cause for removal from the University.

EXPENSES OF THE STUDENT

Tuition and Registration Fees

The Constitution of the State of California, as amended November 6, 1900, authorizes the Legislature to exempt University property from taxation under certain conditions, and provided residents of California are charged no fees for tuition unless such fees shall be authorized by the Legislature. An act of the Legislature, approved February 14, 1901, "exempting from taxation a portion of the property held in trust for the benefit of the Leland Stanford Junior University," as aemnded in March, 1907, provides "that while this act is in force no fees shall be charged residents of this State for tuition, except that such fees may be charged in professional and engineering courses, but no such fees shall be charged to any student who is registered in any such courses when this act takes effect." Such tuition fees, in professional and engineering courses, have not as yet been imposed by the Trustees.

Graduate students in Law and Engineering, and all undergraduates, are charged a registration fee of *ten dollars* per semester; special students, *fifteen dollars* per semester. But these registration fees are waived in the case of *bona fide* residents of California who have been resident in the State at least one year immediately preceding registration. Students in laboratory courses pay for the materials which they use, and in various courses syllabus fees are charged. Laboratory and syllabus fees are different for the different courses, ranging from *fifty cents* to *twenty-five* dollars per semester (see under "Courses of Instruction ").

Cost of Living

The cost of living in Roble Hall, including board, room, light, heat, and attendance, averages about twenty-seven dollars per month. Students furnish their own linen, blankets, towels, and napkins. Rooms may be reserved in advance by making a deposit of two dollars.

Rooms in Encina Hall, furnished similarly to those in Roble Hall, but without board, cost from $6.00 to $6.50 per month, with two in a room. There are a few single rooms at $8.00 per month. Students occupying a double room alone pay the full price of the room. Each double room is furnished with two single beds. Rooms may be reserved in advance by making a deposit of two dollars.

Students may live outside the Halls only in places approved by the University.

In Palo Alto and College Terrace, at an average distance of a mile and a quarter from the University, rooms and board, in private houses, can be obtained, at from twenty-five to thirty dollars per month. A considerable number of students live in co-operative clubs, in which the cost of board and room is reduced as low as eighteen dollars per month; such rooms are lighted and heated, but usually unfurnished. Special commutation tickets are issued by the Southern Pacific Company, and students living in towns on the line of the railway, from San Francisco to San Jose, easily go to and from the University daily. Carriages connect with all trains at Palo Alto.

On arriving at the University, new students may obtain information as to rooms and board at the Information Bureau conducted by the Christian Associations at the Palo Alto station and at the University. A complete list of approved rooms and boarding places will be provided. Particular inquiries may be addressed to the secretaries of the Christian Associations.

The University Inn, located near the Quadrangle, has dining accommodations for about three hundred students.

Books and stationery will average from eighteen to twenty-five dollars per year.

The necessary expenses of the student, exclusive of clothing and railway fares, range from $275 to $400 per year.

Memorial Scholarship

The Leland Stanford Junior Scholarship, established by Mrs. Stanford, in 1900, pays the necessary expenses of its holder throughout the undergraduate course. The present holder of the scholarship is CARL AUGUSTUS LANTZ, of Colton, California.

Self-Support of Students

A considerable number of students manage, in one way or another, to earn the whole or a part of their expenses while attending the University. Such opportunities occur in the line of office and laboratory assistance, personal services of numerous kinds, the management of various student enterprises, agencies for laundries, etc.

The Student Employment Bureau (in charge of the Christian Associations) registers without charge all students who apply for employment, and supplies employers with student labor as demanded. In general, the demand and supply are nearly equal, but the attention of new students who intend to earn the whole or part of their living is called to the following results of past experience:

1. There is a constant *over-supply* of those wishing to do teaching and clerical work. None but those having superior qualifications and experience are likely to secure employment the first semester.

2. There is a considerable demand for efficient stenographers; also for men and especially women students who can do domestic labor of any kind; board and room rent may be earned by waiting on table, washing dishes, general housework, house cleaning, gardening, etc.

3. Students who can do any kind of domestic or manual labor *well,* and who have thoroughly good health, can earn their board by three hours' work per day, or board and room by four hours' work per day. Those who are bookbinders, printers, mechanics, or carpenters, will have a decided advantage in obtaining employment. *But no student should come to the University without resources sufficient for the expenses of one semester.*

4. The University curriculum is adapted to those who have control of their entire time for study. The student who must earn his living, therefore, should expect to take less than the usual amount of University work.

5. No student should come expecting to earn money, who can do nothing well; skill is absolutely essential, as competition is quite as severe in the college community as elsewhere.

6. Opportunities for earning money during the summer vacations can usually be counted on, the demand for canvassers being most constant.

Particular inquiries concerning opportunities for self-support should be addressed to the Secretaries of the Christian Associations. Upon arrival at the University new students should report for registration and information to the Information Bureau of the Associations.

UNIVERSITY HEALTH CONTROL

The University exercises an advisory control over student health affairs through the Committee on Public Health, whose Chairman is the University Health Officer.

Every student upon entering the University is required to report to the University Health Officer for a brief medical examination of his eyesight and general health. Any condition which may place a limitation on the amount or kind of work planned by the student is discussed with him or made the subject of a report to his major department or to the Committee on Registration.

Students intending to train for any of the athletic teams, or to register for gymnasium work, are required to pass a careful physical and medical examination at the beginning of each semester.

A careful inspection of all boarding and rooming houses in the community is carried out under the supervision of the Public Health Committee, and only those are permitted to register who arrange to live in houses which have been approved.

All students are entitled to medical consultation and to individual advice in other matters directly or indirectly relating to their health, at any time during the year; but no treatment is undertaken by the University.

Students' Guild

Provision for the care of all cases of serious illness is made by the Guild, which is a student organization now thoroughly equipped for its work. A hospital is owned and operated through the management of a Board of Directors composed of students and members of the faculty. Complete operating-room facilities and isolation-wards have been provided. The hospital is in charge of an executive nurse, with an adequate nursing and house-keeping staff.

All students are required to become members of the Guild by paying the fee, which for 1906-07 is two dollars each semester. A uniform hospital rate of one dollar per day is charged all members of the Guild.

The officers of the Guild for 1906-07 are as follows: President, GEORGE JOSEPH PRESLEY, Vice-President, EDITH R. MIRRIELEES; Secretary, DAVID TIMMINS FULLAWAY; Treasurer, JOHN COBB MCFARLAND; Board of Directors: The OFFICERS, Professors SNOW, GRIFFIN, and SWAIN, and Mr. GEORGE CLIFFORD COE.

GRADUATION

Candidates may present themselves for graduation in January, May, and September.

No degree will be conferred upon any person who has not spent at least one year in resident study at the University. No honorary degrees are given.

BACHELOR OF ARTS

The degree of BACHELOR OF ARTS (A. B.) is conferred upon candidates who have satisfactorily completed a total of one hundred and twenty units of University work and who have also satisfied the requirements in major and minor subjects.

Thirty units constitute a normal year's work (see p. 64), but the ordinary class divisions (freshman, sophomore, junior, senior) are not recognized by the University. The degree is conferred whenever the requirements are met, without regard to the time spent, except that at least thirty units (including the last fifteen) must be completed in this University.

Each student selects as his major subject or specialty the work of some one department. This department has the authority to require the completion of this *major* subject, and also of such *minor* subjects in other departments as may be considered necessary or desirable collateral work. Such major and minor requirements taken together will not (except in the departments of applied science) exceed forty units of University work, or one-third of the student's time during his undergraduate course.

With these exceptions, all the undergraduate work in all departments is elective. The student may freely choose for such elective work any subject taught in the University, which his previous studies have prepared him to undertake.

The department in charge of the major subject of any student is expected to act as adviser to the student in educational matters, and the recommendation of the department is necessary to graduation.

(A student in regular undergraduate standing who does not intend to become a candidate for the A. B. degree, may choose, with the approval of the major department, any courses in the University which his previous training has prepared him to undertake.)

Candidacy for Advanced Degrees

Every applicant for an advanced degree must file at the Registrar's office not later than the beginning of the semester preceding that in which the degree is sought, a formal application including a statement of the proposed course of study. This application must be approved by the department faculty concerned, and upon acceptance by the Committee on Graduation the applicant is admitted to candidacy for such advanced degree. It is advisable that such application be made as early as possible in the student's course. Where a thesis is required it shall be upon a subject approved by the department, and, if for the doctor's degree, shall be presented in its final form, to the Chairman of the Committee on Graduate Study, at least six weeks before the close of the semester in which the degree is sought. Accepted theses for the master's degree shall be bound in a uniform style and deposited in the University Library. No advanced degree will be conferred except upon the recommendation of the Committee on Graduate Study.

MASTER OF ARTS

The degree of MASTER OF ARTS (A. M.) is conferred upon graduates of this University, and upon others who have had an equivalent training elsewhere, on the satisfactory completion, in residence, of one year of graduate work, beyond the baccalaureate requirements of the department in which the degree is sought, and on the presentation of an approved thesis, or the passing of a satisfactory examination, or both. At least two-thirds of the year's work required of the candidate is to be devoted to the major study. Work done in the University outside of the requirements for the degree must be registered, but will not be taken into account in connection with the degree.

Special regulations are as follows:

1. A report upon the character of the work done will be made by each instructor under whom a candidate is registered.

2. Some evidence of ability to do independent work is required of every candidate. In addition, therefore, to examination, a thesis is expected, unless such evidence is furnished in other ways.

ENGINEER

In the departments of applied science the professional degree of ENGINEER is conferred upon graduates of this University, and upon others who have had an equivalent training elsewhere, on the satisfactory completion, in residence, of one year of professional study beyond the baccalaureate requirements of the department in which the degree is sought, and on the presentation of an approved thesis, showing ability to do independent work.

JURIS DOCTOR

The degree of JURIS DOCTOR (J. D.) is conferred upon students who have previously received the academic degree of Bachelor of Arts, or its equivalent, upon the completion of a three years' professional law course as defined by the Department of Law.

DOCTOR OF PHILOSOPHY

The degree of DOCTOR OF PHILOSOPHY (Ph. D.) is conferred upon graduates of this University, and upon others who have had an equivalent training elsewhere, on the satisfactory completion of at least three years of graduate work, beyond the baccalaureate requirements of the department in which the degree is sought, under the following conditions:

1. The degree is given only on the ground of advanced scholarship and the ability to do independent work in some special line, and not for merely faithful study for a prescribed time or course, nor for miscellaneous study. Three years represents the minimum time in which the degree can be obtained and often a longer period of study will be necessary.

2. Graduate work done elsewhere may be accepted in place of resident study in this University; but in no case will private study without sufficient guidance, or pursued at a distance from libraries or laboratories or other necessary facilities, be accepted as an equivalent; and no degree will be granted to any person who has not spent at least the last year of such study in residence at this University.

3. All candidates will be required to show a reading knowledge of French and German, and this requirement must be fulfilled at least one year before the final examinations for the degree. The candidate's ability to read his special literature in these languages shall be tested by the faculty of the department in which the major subject is taken.

4. The course of study shall embrace one major subject and one or two minors. The minor subject or subjects shall represent approximately one-third of the course of study; except that such minor subjects may be waived on the recommendation of the department in which the major subject is taken and with the approval of the Committee on Graduate Study, when the breadth and extent of the candidate's training justify such a course,—in which case the candidate will be expected to show such breadth of training in his oral examinations.

In the nature of the case the work offered as minors cannot always be graduate work, but it should be advanced work and should, whenever possible, be planned as part of the course leading to the Ph. D. degree. If the work has been done before the student enters this University it shall be passed upon by the department in which it would have been done if taken here. This department is free to test the candidate as it sees fit.

5. The candidate must present a thesis of such a character as shall display power of original and independent investigation and constitute an actual contribution to knowledge. He must guarantee the printing of the thesis, in a form approved by the Committee on Graduate Study, within one year after the degree is conferred, and must deposit one hundred copies in the University Library.

6. The candidate must sustain final written examinations in major and minor subjects conducted by the department in which the study was taken and also shall submit to an oral test or examination by the special Examining Committee of the Faculty.

The special Examining Committee shall consist in each case of (1) the professor in charge of the major subject, (2) the one or more professors in charge of the minor subjects, (3) two members of the Committee on Graduate Study whose departments lie nearest to that of the major professor, and (4) the Chairman of the Committee on Graduate Study, acting as its secretary.

THE HIGH SCHOOL TEACHER'S CERTIFICATE

The minimum amount of pedagogy prescribed by Section 1521, subdivision 2 (*a*), of the Political Code of California, is defined by the State Board of Education as follows:

"Satisfactory completion of courses, suitable and essential to acquiring efficient skill in teaching and an intelligent comprehension of the scope and the attainable goals in high school instruction; said courses to be equivalent to not less than twelve hours per week for one half-year; *provided*, that at least one-third of this work shall consist of practical teaching under the direction of supervising instructors of academic competency and breadth of pedagogic comprehension who for a period of not less than two years have taught the subjects in which they supervise.

"The State Board of Education is not authorized by Section 1521 to specify institutions in which this prescribed pedagogy may be taken, but as standards of equivalents the certificate from any institution belonging to the Association of American Universities, or from any California State Normal School, or their recognized equivalents, may be accepted, provided that the recommendation of applicants by faculties of institutions in which the pedagogical courses are pursued, attests that the requirements above stated have been fulfilled."

The State Board of Education has formulated the following rules for the granting of high school certificates:

"1. High School Certificates may be issued under the provisions of Section 1521, subdivision 2 (*a*), and Section 1775, subdivision 1 (*a*), of the Political Code of California, as follows:

(*a*) To candidates who have received the Bachelor's Degree from a college requiring not less than eight years of high school and college training, and who submit evidence that in addition to the courses required for the Bachelor's Degree they have successfully completed at least one year of graduate study in a university belonging to the Association of American Universities; which year of graduate study shall include one half-year of advanced academic study (part of the time, at least, being devoted to one or more of the subjects taught in the high school), and such other time in a well-equipped training school of secondary grade directed by the Department of Education of any one of the Universities of the Association, as may be necessary to fulfill the pedagogical requirements prescribed by this Board.

(*b*) To candidates who have received the Bachelor's Degree from a college requiring not less than eight years of high school and college training, and who submit evidence that in addition to the courses required for the Bachelor's Degree they have successfully completed at least one half-year of graduate study in a university belonging to the Association of American Universities; which half-year of graduate study shall consist of advanced academic study (part of the time, at least, being devoted to one or more of the subjects taught in the high school); and six months as student teachers in a well-equipped school of secondary grade directed by a California State Normal, or its recognized equivalent, under conditions conforming to the requirements prescribed by this Board as the minimum amount of pedagogy.

"2. In lieu of the pedagogical training above prescribed, candidates may submit evidence showing that they are graduates of a California State Normal School, or other Normal School officially recognized by this Board as of equivalent rank, or have taught with decided success as regular teachers or as principals at least twenty months in any reputable school, elementary or secondary; and provided that until July, 1908, the practical teaching prescribed may have been pursued in schools of grammar or secondary grade in connection with a California State Normal School, or under the direction of the Department of Education of the University of California or of Leland Stanford Junior University, as evidenced by a certificate of proficiency.

"3. The institution granting the Bachelor's Degree, the institution in which the post-graduate academic study is pursued, and the institution in which the pedagogical work is done, shall each certify to the high character of the work accomplished under its direction, and to the personal fitness of the candidate."

The University Recommendation

In addition to the technical requirements prescribed by the State Board of Education the University will require, as preliminary to any recommendation for the teacher's certificate, the completion of enough work (and of sufficiently high grade), in at least one subject, to secure a Department recommendation that the candidate is fitted to teach the subject in high school classes.

The Department requirements for such recommendation are, in most cases, stated in the Register under the Department headings; but each candidate *should find out definitely* from the Departments concerned, not later than the beginning of the Senior year, preferably earlier, the particular requirements which must be met.

It is advisable that every candidate for the teacher's recommendation should endeavor to fulfill the Department requirements in at least *two* high school subjects.

For information and advice as to possible and desirable combinations of subjects for high school positions, students are invited to consult the Secretary of the Committee on Recommendation of Teachers.

Recommendation of Teachers

The University undertakes (1) to keep a record of students and graduates who wish to teach, or to be transferred to other teaching positions, and (2) upon application of Boards of Education, School Trustees, or other officials, to recommend for suitable vacancies such candidates as seem most likely to succeed.

The University does not solicit positions for its graduates, and reserves the right to refuse to recommend candidates enrolled. Information received from University instructors and others regarding the fitness of candidates is regarded as confidential, and general letters of recommendation are not given.

Blanks for registration may be obtained of the Secretary, at the Registrar's office. They should be filled out each year, preferably during March or April.

COURSES OF INSTRUCTION

GREEK

AUGUSTUS TABER MURRAY, Professor.

HENRY WINCHESTER ROLFE, Associate Professor.

With the co-operation of Professor FAIRCLOUGH, and Assistant Professors ELMORE, FOSTER, and MARTIN, of the Department of Latin.

UNDERGRADUATE COURSES

Instruction in the lower classes is given chiefly by means of recitations, but as the student advances these are supplemented by lectures.

It will be seen that provision is made for those who have had no Greek before coming to the University.

The Teacher's Recommendation

Courses 2, 3, 4, 5, and 17 constitute the minimum requirement for the high school teacher's recommendation in Greek.

1. **Elementary.**—Grammar; translation of easy prose; Greek composition. After the essential grammatical forms have been mastered, passages of continuous prose are taken up for translation, and, as soon as is practicable, the Anabasis. The student is made familiar with the ordinary forms of syntax, and exercises in writing Greek are regularly introduced. This course does not count as a part of the major work for students in Greek. [Beginning with 1907-08 this will be given as a three-hour instead of a five-hour course.]
3 units, both semesters (MURRAY)

2. **Plato and Lysias.**—The Apology and Crito, and selections from Lysias. Course 2 is open to those who have offered subject 22 on entrance, or who have completed course 1 in the University. 3 units, 1st semester (ELMORE)

3. **The Odyssey and Herodotus.**—A continuation of course 2. Selections from the Odyssey and from Herodotus.
3 units, 2d semester

4. **Prose Composition and Sight Translation.**—Simple prose is taken up for sight reading, and the exercises are based

upon the text read. Required of Greek majors in connection with courses 2 and 3.
2 units, both semesters (FAIRCLOUGH, MURRAY)

5. **Syntax.**—Lectures and exercises on Greek syntax, treated from a practical rather than a theoretical standpoint. [Not to be given in 1907-08.]
1 unit, 1st semester (MURRAY)

6. **Geography.**—The geography of the Greek world, and the geographical ideas of the Greeks. [Not to be given in 1907-08.] 1 unit, 2d semester (ROLFE)

7. **Homer.**—A critical study of the Iliad, with discussions and papers on Homeric topics. Prerequisites: courses 2 and 3, or an equivalent. 3 units, 1st semester (———)

8. **Euripides, Lucian, etc.**—The Alcestis of Euripides, selections from Lucian, and selections from the Lyric Poets. A continuation of course 7.
3 units, 2d semester (FOSTER)

9. **Prose Composition and Sight Translation.**—Selections for translation from the historical and philosophical writers; practical exercises in Greek composition. Prerequisite: course 4, or an equivalent. Required of major students before graduation. 2 units, both semesters (———)

10. **History of Greece.**—A general outline course. Not open to first year students. [Not to be given in 1907-08.]
3 units, both semesters (ROLFE)

11. **Greek Religion, Mythology, and Ritual.**—Lectures with stereopticon. [Not to be given in 1907-08.]
2 units, 1st semester (ROLFE)

12 **Greek Art.**—With especial reference to Sculpture and Vase Paintings. Lectures, with stereopticon.
2 units, 2d semester (FAIRCLOUGH)

13. **Private Life of the Greeks.**—Lectures, illustrated by stereopticon. 2 units, 2d semester (MARTIN)

14. **Greek Tragedy.**—The Prometheus of Aeschylus, the Antigone and Electra of Sophocles, and the Hippolytus and Iphigenia Taurica of Euripides. Other plays are assigned for private study, and lectures on the drama are from time to time given. 3 units, both semesters (MURRAY)

15. **Plato and Demosthenes.**—The Phædo and the De Corona. [Not to be given in 1907-08.]
3 units, 1st semester (ROLFE)

16. **Thucydides.**—Books VI and VII, the Sicilian Expedition. [Not to be given in 1907-08.]
3 units, 2d semester (ROLFE)

[Courses 15 and 16 alternate with course 14.]

17. **Teachers' Course.**—Lectures and practical exercises.
2 units, 1st semester (MARTIN)

18. **Bucolic Poetry.**—Selected Idylls of Theocritus, Bion, and Moschus and the Eclogues of Vergil are read and interpreted. [Students completing this course will receive one unit credit in Greek and one in Latin; not given in 1907-08.] 2 units, 2d semester (MURRAY)

19. **Greek Testament.**—A study of the Gospel of Mark and of the Epistles. 2 units, both semesters (MARTIN)

19b. **Classical Lectures.**—[See Latin 30.]

GRADUATE COURSES

The center of the Graduate work is the Greek Seminary—made up of the director and such students as satisfy him of their fitness for the work. The Seminary meets weekly for the critical interpretation of some Greek author, the different members, in turn, filling the post of interpreter. Topics for investigation are assigned, and papers prepared by the members are read and discussed.

Members of the Seminary are expected to supplement their critical work by wide reading, and lectures on the author or authors under discussion are given by the director. It is in the highest degree desirable that all members of the seminary should be able to read both French and German.

20. **The Greek Seminary.**—In 1907-08 the Seminary will be occupied with the study of Plato. An analytical study of the Republic will be undertaken, and other dialogues will be assigned for private study. Lectures by the director will accompany the work of the Seminary.
2 units, both semesters (MURRAY)

21. **Rapid Reading.**—Graduate and advanced students will meet weekly for the rapid reading of select dialogues of Plato. 1 unit, both semesters (MURRAY)

SPECIAL LECTURES

Throughout the year Professor Murray gives lectures, twice weekly, on Greek Epic and Dramatic Poetry. These lectures are intended for general literary students, and do not presuppose a knowledge of Greek; they will not count as part of the major work for students in Greek.

23. **The Greek Epic.** 2 units, 1st semester (MURRAY)

24. **Greek Tragedy.** 2 units, 2d semester (MURRAY)

LATIN

HENRY RUSHTON FAIRCLOUGH, Professor.

JEFFERSON ELMORE, BENJAMIN OLIVER FOSTER, ERNEST WHITNEY MARTIN, Assistant Professors.

With the co-operation of Professor MURRAY and Associate Professor ROLFE of the Department of Greek.

UNDERGRADUATE COURSES

The aim of the undergraduate courses in Latin is to give the student a somewhat systematic knowledge of the language and its development, an acquaintance with the representative authors of Latin literature, and some insight into the life, culture, and civilization of ancient Rome.

The Teacher's Recommendation

Students who complete twenty units of the work accepted as part of the major requirements in Latin, including two courses of Prose Composition, and in addition the Teachers' Course in Latin, may receive a recommendation from the Department to teach Latin as a minor subject.

1. **Vergil and Cicero.**—Vergil, selected books of the Æneid; Cicero, selected orations; exercises in Latin composition. This course is planned for those who have passed in entrance subject 21*a*. Course 1 does not count as major work for students in Latin. 3 units, both semesters (———)

2. **Terence, Cicero, and Horace.**—Terence, Andria; Cicero, De Senectute; Horace, Odes and Epodes. Open to students who have completed course 1, or who have offered entrance subject 21*b*. [Two of the three hours will be devoted to class-room work; for the third hour the sections will be

divided into small groups which will meet with an instructor for an informal discussion of work especially adapted to the needs of individual students.] 3 units, both semesters (FAIRCLOUGH, ELMORE, FOSTER, MARTIN)

3. **Terence, Cicero, and Horace.**—Terence, Andria; Cicero, De Senectute; Horace, Selections. Intended for non-majors desiring an acquaintance with certain representative works of Latin literature who cannot devote more than four unit-hours to Latin. Not open to Latin majors.
2 units, both semesters (MURRAY)

4. **Prose Composition I.**—Open to those taking course 2, and required of all major students in Latin. The work in composition is accompanied by a study of Eutropius, Quintus Curtius, Cæsar's Civil War, and Cicero's Scipio's Dream.
2 units, both semesters (MARTIN)

5. **Horace.**—Satires and Epistles. Open to those who have completed course 2 or 3. Attention is directed especially to the style and subject matter, to Horace's influence upon later literature, and to the salient features of the Augustan age.
3 units, 1st semester (MARTIN)

6. **Livy and Tacitus.**—Selections from Livy's History and the Annals of Tacitus. This course, complementary to course 5, involves a survey of Roman history and the literature of the early empire.
3 units, 2d semester (ELMORE)

7. **Prose Composition II.**—Open to students who have taken course 4.
1 unit, both semesters (ELMORE, FOSTER)

8. **Roman Comedy.**—The Rudens of Plautus and the Adelphoe of Terence. Attention is paid to the early forms, constructions, and metres, and to the staging of a Roman play, with some consideration of the differences in style and dramatic art between the two playwrights.
2 units, 1st semester (FAIRCLOUGH)

9. **The Letters of Cicero.**—The aim is to get a view of Cicero and his times from the original sources, to ascertain the causes for the breaking down of the Republic, and to become familiar with official procedure in the judicial and legislative bodies. Special attention is paid to the style of the letters. 2 units, 2d semester (MARTIN)

10. **Pliny.**—Selections from the letters of the younger Pliny. 2 units, 1st semester (MARTIN)

11. **Roman Elegy.**—Selections from Tibullus, Propertius, and Ovid, accompanied by lectures on the development of elegiac poetry among the Greeks and Romans. [Not given in 1907-08.] 2 units, 2d semester (FOSTER)

12. **Lucretius.**—Selections from the De Rerum Natura are read with particular attention to the philosophic thought and its poetic treatment. 2 units, 1st semester (FOSTER)

13. **Prose Composition III.**—A course for third-year students. 1 unit, both semesters (FAIRCLOUGH)

14. **Martial.**—Selections from the Epigrams of Martial, with supplementary reading in other writers of the first century. 2 units, 1st semester (ELMORE)

15. **Quintilian.**—Book X, with selections from Cicero, De Oratore. Rhetoric and literary criticism among the Romans. 2 units, 1st semester (FOSTER)

16. **Prose Composition IV.**—Translations from English authors. For advanced students. 1 unit, both semesters (FAIRCLOUGH)

17. **Teachers' Course.**—Lectures on methods of teaching Latin, with practical exercises. Open only to advanced students. 2 units, 2d semester (ELMORE)

18. **Roman Law.**—This course, based upon the Commentaries of Gaius, deals with the leading principles and history of Roman Law, and its survival in modern times. Open to all who have some knowledge of Latin, and intended especially for students in Law. 2 units, 1st semester (FAIRCLOUGH)

19. **Latin Poetry.**—Selections from various poets, with lectures. 2 units, 2d semester (FOSTER)

20. **Roman History from the Sources.**—The topic selected for 1906-07 was the "year of confusion" (69 A. D.), the narrative of Tacitus being supplemented by a study of Plutarch, Suetonius, and Dio. Readings, lectures, and reports. [Not given in 1907-08.] 2 units, 1st semester (FOSTER)

21. **The Roman Novel.**—The Cena Trimalchionis of Petro-

nius, and the story of Cupid and Psyche from the Golden Ass of Apuleius. [Not given in 1907-08.]
2 units, 2d semester (FOSTER)

GRADUATE COURSES

These courses are open to graduates in Latin who have had at least two years' undergraduate work in Greek. The ability to read French and German is also very desirable, and, in the case of candidates for the degree of Ph. D., necessary. The aim of the courses is to give the student a thorough grasp and detailed knowledge of particular authors, and of certain periods and fields of literary activity, as well as a training in literary criticism, and an acquaintance with the methods of original research.

22. **Latin Seminary.**—In 1907-08 the Seminary will be devoted to the problems of Roman Comedy, and a special study will be made of the Trinummus of Plautus.
2 units, both semesters (FAIRCLOUGH)

23. **Reading.**—A careful reading of select plays of Plautus and Terence, in connection with the Seminary work.
1 unit, both semesters (FAIRCLOUGH)

24. **Introduction to Latin Palaeography.**—Lectures and practice in reading fac-similes of manuscripts. Included in seminary work. [Not given as a separate course in 1907-08.]
(FAIRCLOUGH)

25. **Introduction to Latin Epigraphy.**—Lectures and readings in the Corpus Inscriptionum. [Not given in 1907-08.]
1 or 2 units, 2d semester (MARTIN)

26. **Advanced Course in Epigraphy.**—Open only to those who have had course 25, or an equivalent.
1 unit, 2d semester (MARTIN)

27. **Historical Grammar.**—Lectures on the sounds and inflections of Latin. 2 units, 2d semester (FOSTER)

28. **History of Classical Philology.**—Lectures.
1 unit, 1st semester (ELMORE)

SPECIAL COURSES

29. **History of Rome.**—A general course, open to all students. 3 units, 2d semester (ELMORE)

30. **General Lectures.**—A series of lectures on various phases of Greek and Roman civilization. Open to all stu-

dents. 1 unit, (two lectures weekly), both semesters
(FAIRCLOUGH, with the co-operation of the other instructors)

31. **Roman Art and Monuments.**—A survey of the topography, architecture, sculpture and other art-forms of ancient Rome and the provinces, illustrated with lantern-slides. This course is open only to students who have some knowledge of Roman history. [Not given in 1907-08.]
2 units, 2d semester (FAIRCLOUGH)

32. **Roman Private Life.**—Lectures, with illustrations from ancient art and other sources. Open to all, but of special importance to Latin students. [Not given in 1907-08.]
2 units, 1st semester (MARTIN)

33. **Roman Political Institutions.**—Lectures and assigned reading on the development and operation of the most important features of the Roman government. Open to all students. [Not given in 1907-08.]
2 units, 2d semester (ELMORE)

GERMANIC LANGUAGES

GEORGE HEMPL,* JAMES OWEN GRIFFIN, Professors.
KARL G. RENDTORFF, WILLIAM ALPHA COOPER, MACY MILLMORE SKINNER, Assistant Professors.
CHARLES FREDERICK SCHMUTZLER, BRUNO BOEZINGER, Instructors.

The Teacher's Recommendation

Students who intend to teach German are expected to take courses 6, 8, 9, 11, 12, 13, 14, 15, and 16.

UNDERGRADUATE COURSES

1. **Elementary.**—German Grammar, translation of easy prose and poetry, composition, exercises in spoken German. Two five-hour sections and one three-hour section. The last is intended for those students who have had some German but not sufficient to enable them to pass the entrance examination in German. 5 and 3 units, both semesters
(COOPER, SKINNER, BOEZINGER)

2. **Second-Year German.**—Continuation of the grammatical work done in Elementary German. A careful study of some

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*Beginning January, 1907.

of the Germanic Classics. 3 units, both semesters
(GRIFFIN, COOPER, SKINNER, SCHMUTZLER, BOEZINGER)

3. **Rapid Reading.**—Rapid translation of modern German prose; writing of German from dictation; paraphrasing of the German text. This course should be taken in connection with course 2, which it is intended to supplement. So far as practicable, the course is conducted in German.
2 units, both semesters
(GRIFFIN, SKINNER, SCHMUTZLER, BOEZINGER)

4. **Advanced German Grammar.**—Lectures and practical exercises. 2 units, both semesters (HEMPL, COOPER)

5. **Modern German Drama.**—Lectures in connection with the interpretation and rapid reading of some of the more important works of the modern dramatists.
2 units, both semesters (GRIFFIN)

6. **Classical German Drama.**—This course aims chiefly to be an introduction to the spirit of the classical German drama; but throughout the course an effort is also made to familiarize the student, by means of various selected readings, with the life and character of the German people.
3 units, both semesters (GRIFFIN, RENDTORFF)

7. **Modern German Novels.**—Reading of standard modern novels, with lectures on the development of the novel.
2 units, both semesters (SKINNER)

8. **German Composition.**—Translation of graded exercises covering the most important parts of German syntax.
2 units, both semesters (SCHMUTZLER)

9. **Advanced Composition.**—Writing of essays in German. The course is conducted in German.
2 units, both semesters (RENDTORFF)

10. **History of German Civilization.**—This course is intended for students of German who wish to become acquainted with German history and the development of German civilization in their relation to German literature. [Not given in 1906-07.]
2 units, both semesters (RENDTORFF)

11. **Goethe.**—Faust. Reading and interpretation of both Parts, and lectures on the more important Faust problems.
2 units, both semesters (COOPER)

12. **History of German Literature from the Earliest Times to the Eighteenth Century.**—Lectures and readings.
2 units, both semesters (RENDTORFF)

13. **History of German Literature during the Eighteenth and Nineteenth Centuries.**—Lectures in German. [Not given in 1906-07.] 2 units, both semesters (RENDTORFF)

14. **Teachers' Course.**—Lectures on the various methods employed in teaching modern languages, together with practical advice in the matter of conducting classes.
2 units, 2d semester (HEMPL)

GRADUATE COURSES

The graduate courses are intended primarily for those students who are candidates for the degrees of Master of Arts and Doctor of Philosophy; but special consideration is also given to the needs of those who intend to make the teaching of German their profession. Graduate work in the Germanic languages is facilitated by the opportunities offered by the library of the late Professor Hildebrand of Leipzig, which contains a rich and well-chosen collection of works on German philology and literature.

15. **Syntax.**—Selected chapters of German Syntax.
2 units, both semesters (RENDTORFF)

16. **Middle-High German.**
2 units, both semesters (RENDTORFF)

17. **Old-High German.**—[Not given in 1906-07.]
2 units, both semesters

18. **Old Norse.**—[Not given in 1906-07.]
2 units, both semesters

19. **Gothic.**—2 units, 2d semester (HEMPL)

20. **The Genesis of Grammar.**—Lectures on the origin and development of the parts of speech.
2 units, 2d semester (HEMPL)

21. **Middle-High German Proseminary.**
2 units, both semesters (RENDTORFF)

22. **Modern German Proseminary.** — Schiller's earlier dramas. 2 units, both semesters (SKINNER)

23. Modern German Proseminary.
2 units, 1st semester (GRIFFIN)

NOTE—In the above the aim has been to report the courses as given in 1906–07. For subsequent modifications the student is referred to the Announcement of Courses for 1907–08.

ROMANIC LANGUAGES

JOHN ERNST MATZKE, Professor.
OLIVER MARTIN JOHNSTON, Associate Professor.
COLBERT SEARLES, CLIFFORD GILMORE ALLEN, Assistant Professors.
STANLEY SMITH,† HOMER PRICE EARLE, Instructors.
LILLIAN FLEISHER, EDWIN HUME SKINNER, MERCEDES DE LUNA, Assistants.

The undergraduate courses in the Romanic Languages are planned so as to give students an intimate acquaintance with the modern forms of the languages spoken in the principal neo-latin countries. To this end systematic attention is paid to pronunciation, reading, syntax, and conversation. In the higher courses special emphasis is laid on the study of literature. In order to give students an opportunity to become familiar with the spoken idioms, several of the advanced courses are conducted as much as possible in the language which forms the object of study.

Students will have the opportunity of selecting either French or Spanish as their major subject. In French the minimum requirement consists of courses 2, 3, 4, 5, 6, 7, 8, and 9. In Spanish a similar requirement will include courses 10, 11, 12, 13, 14, 15, 16, and 17.

In addition to these requirements major students in either French or Spanish will be expected to take the following courses: Latin 1, 2, 5, 6, 8, and 9 or 14; German 1, 2, and 3; English 2 and 4; History 3, 4 or 5, and 13; and Elementary Spanish or French.

The Teacher's Recommendation

The minimum requirement for the high school recommendation is as follows: In French: courses 2, 3, 4, 5, 8; in Spanish: courses 10, 11, 12, 13, 14, 15. The Department will insist also on courses 20 and 21 and Latin 4. Recommendations will be given only on the vote of the Department, and will demand a degree of scholarship above the ordinary passing mark.

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†Absent on leave.

1a. Elementary French.—François, Beginners' French, with written and oral exercises and systematic training in French pronunciation on the basis of Matzke's Primer of French Pronunciation; Aldrich and Foster's French Reader.
3 units, both semesters (SEARLES, JOHNSTON, EARLE)

1b. Elementary French, Reading Course.—The course is intended for students who merely desire to obtain a reading knowledge of the language, and will not prepare for the more advanced courses in the Department. Aldrich and Foster's Foundations of French; Matzke's Primer of French Pronunciation; Aldrich and Foster's French Reader; Dumas, La Tulipe Noire. 3 units, both semesters (SEARLES)

[Courses *1a* and *1b* are open to all, but students desiring to enter after the end of the second week will be admitted only upon special examination.]

2. Modern French Syntax.—François, Advanced French Prose Composition. Open to students who have completed course *1a*, or who have received credit for entrance subject 19*a*. 2 units, both semesters (SEARLES, ALLEN)

3. Modern French Reading.—O'Connor, Choix de Contes Contemporains; Daudet, Tartarin de Tarascon; Balzac, Eugénie Grandet; Hugo, Hernani; Rostand, Cyrano de Bergerac. Open to students who have completed courses *1a* or *1b*, or who have received credit for entrance subject 19*a*. [The section meeting at 9:15 will be open only to students selecting course 2, or having completed it, and will be devoted to more special study of syntax in connection with the reading. The remaining sections are intended to give general opportunity for obtaining a more perfect reading knowledge of the language.]
2 units, both semesters (SEARLES, EARLE)

4. French Conversation.—There will be three meetings of the class during the week, for which two units of credit will be given toward graduation. Open to students who have completed course 1, or who have received credit for entrance subject 19*a*. 2 units, both semesters (JOHNSTON, ALLEN)

[Courses 2, 3, and 4 constitute the second year's work in French, and should, if possible, be taken during the same year. Course 4 may not precede course 2.]

5. **Classical French.**—A study of the principal authors of the classical period. Representative texts will be read from the works of Corneille, Racine, Molière, Voltaire, Le Sage, La Fontaine, and Boileau. Open to students who have completed courses 2 and 3, or their equivalent.
3 units, both semesters (JOHNSTON)

6. **History of French Literature from the Renaissance to the Romantic Movement.**—Lectures supplemented by reading and reports by the members of the class. Students will need Kastner and Atkins, A Short History of French Literature (Holt & Co.), and Lanson, Histoire de la Littérature française (Paris, Hachette). Open to students who have completed courses 2 and 3, or their equivalent.
2 units, both semesters (SEARLES)

7. **History of French Literature in the Nineteenth Century.**—Lectures, with reading of the principal authors and reports by the members of the class. Students should provide themselves with Pellisier, Le mouvement littéraire au XIXe siècle (Paris, Hachette, 1889). Open to students who have completed courses 5 or 6.
2 units, both semesters (MATZKE)

8. **Advanced French Prose Composition.**—Translation into French of selected English prose. Open to students who have completed course 2, or its equivalent.
2 units, both semesters (MATZKE)

9. **French Themes.**—The course will be conducted in French. Open to students who have completed courses 2, 3, 4, and 8, or their equivalent.
1 unit, both semesters (JOHNSTON)

10. **Elementary Spanish.**—Hills and Ford, A Spanish Grammar; Matzke, First Spanish Readings; Alarcón, Novelas Cortas Escogidas. Open to all.
2 units, both semesters (ALLEN, SMITH)

11. **Modern Spanish Syntax.**—Ramsey, A Text-book of Modern Spanish. Open to students who have completed course 10, or who have received credit for entrance subject 18*a*. 2 units, both semesters (EARLE)

12. **Modern Spanish Reading.**—Moratín, El sí de las Niñas; Galdós, Marianela; Echegaray, Locura ó Santidad; Tamayo y Baus, Un Drama Nuevo; Palacio Valdés, La Alegría del Capitán Ribot; Nuñez de Arce, El Haz de Leña. Open to students who have completed course 10, or who have received credit for entrance subject 18*a*.
2 units, both semesters (ALLEN, EARLE)

13. **Spanish Conversation.**—There will be three meetings of the class during the week, for which two units of credit will be given toward graduation. Open to students who have completed course 10, or its equivalent.
2 units, both semesters (ALLEN, SMITH)

[Courses 11, 12, and 13 constitute the second year's work in Spanish, and should, if possible, be taken during the same year. Course 13 may not precede course 11.]

14. **Classical Spanish.**—Cervantes, Don Quijote; Lope de Vega, La Estrella de Sevilla; Calderón, La Vida es Sueño, and El Mágico Prodigioso; Alarcón, La Verdad Sospectosa; Moreto, El Desdén con el Desdén; Ford, A Spanish Anthology. Open to students who have completed courses 11 and 12. 2 units, both semesters (ALLEN)

15. **Advanced Spanish Composition.**—Translation into Spanish of selected English prose. Open to students who have completed course 11, or its equivalent.
1 unit, both semesters (ALLEN)

16. **Spanish Themes.**—The course will be conducted in Spanish. Open to students who have completed courses 11, 12, 13, and 15, or their equivalent.
1 unit, both semesters (———)

17. **History of Spanish Literature.**—Lectures, with reading of important works and reports by the members of the class. Students should provide themselves with Butler Clarke's Spanish Literature (Macmillan & Co., New York). Open to students who have completed course 14, or its equivalent.
3 units, both semesters (———)

18. **Elementary Italian.**—Grandgent, An Italian Grammar; Bowen's First Italian Readings; Manzoni, I Promessi Sposi. Open to students who have completed French, courses 1*a*

or *1b*, or Spanish 10, or who have received credit for entrance subject 18*a* or 19*a*.

3 units, both semesters (JOHNSTON)

19. **Advanced Italian.**—Dante, La Divina Commedia. Open to students who have completed course 18.

2 units, both semesters (———)

TEACHERS' COURSES

20. **Phonetics.**—Lectures on the organs of speech and the nature and formation of speech sounds with special reference to the pronunciation of French. Intended particularly for teachers of language. Open only to advanced students.

2 units, 1st semester (MATZKE)

21. **Teachers' Course in French.**—Lectures on methods of teaching French, study of the available text-books and practical exercises in teaching French. Open only to advanced students. 2 units, 2d semester (MATZKE)

[Courses 20 and 21 are given in alternate years; they will be given in 1907-08.]

GRADUATE COURSES

Courses of instruction for graduate students in Romanic philology and literature lead to the degrees of Master of Arts and Doctor of Philosophy and are planned for the benefit of specialists, particularly of such as are intending to become teachers of the Romanic languages. Admission to regular standing in this department presupposes an undergraduate curriculum of study which has included Latin and French, and has afforded proficiency in at least one of the principal languages of the Romanic group (French, Spanish, or Italian). In addition to this, a good reading knowledge of German (for purposes of advanced study) is requisite.

22. **History of Old French Literature.**—Lectures on the history and development of French Literature from the beginning to the end of the fifteenth century.

2 units, both semesters (MATZKE)

23. **French Historical Grammar.**—Lectures on Old French Phonology and Morphology. Students should provide themselves with Schwan-Behrens, Grammaire de l'Ancien Français, traduction de Bloc (Leipzig, Reisland, 1900), Suchier

Altfranzösische Grammatik (Halle, Niemeyer, 1893), Körting, Lateinisch-Romanisches Wörterbuch (Schöningh, Paderborn, 1901). One hour every week will be given up to practical philological exercises based on Paris's edition of La Vie de Saint Alexis (Paris, Vieweg, 1903), and Suchier's edition of Aucassin et Nicolete (Schöningh, Paderborn, 1903).
3 units, both semesters (MATZKE)

24. **Old French Texts.**—Translation of Old French texts from Bartsch, Chrestomathie de l'Anciėn Français, rẹvue par Horning, Leipzig, Vogel, 1901.
2 units, both semesters (JOHNSTON)

25. **Old French Syntax.**—Lectures.
1 unit, both semesters (JOHNSTON)

26. **Old Spanish.**—Old Spanish Grammar with readings from Gorra, Lingua e Letteratura Spagnuola delle origini (Hoepli, Milan, 1898). [Course 26 will not be given during 1907-08.] 2 units, 1st semester (MATZKE)

27. **Popular Latin.**—Lectures. [Course 27 will not be given during 1907-08.] 2 units, 2d semester (MATZKE)

28. **Seminary.**—In 1906-07 the Seminary was occupied with the study of Corneille and the dramatic theories of the Renaissance and the seventeenth century.
2 units, both semesters (MATZKE)

29. **Journal Club.**—The instructors in the Department and the advanced students meet regularly on alternate Thursdays for the discussion of the periodicals and new books.

ENGLISH LITERATURE AND RHETORIC

MELVILLE BEST ANDERSON,* ALPHONSO GERALD NEWCOMER, Professors.

RAYMOND MACDONALD ALDEN, SAMUEL SWAYZE SEWARD, JR., HOWARD JUDSON HALL, LEE EMERSON BASSETT, HENRY DAVID GRAY, WILLIAM DINSMORE BRIGGS, Assistant Professors.

FREDERICK ALEXANDER MANCHESTER, THERESA PEET RUSSELL, Instructors.

CATHERINE LEOTA FIELDS, Acting Instructor.

EDITH R. MIRRIELEES, WALTER YEELING WENTZ, LOUISE KATE FLEMING, ALICE MARY ROBBINS, HELEN THOBURN, Assistants.

Requirements for the Degree of Bachelor of Arts

a. The courses in Chaucer, 3 units; Shakspere (advanced), 3 units; Milton (or Wordsworth, or Spenser), 3 units; History of English Literature from the beginning to 1798, 12 units; besides such preliminary courses in vocal training, composition, or literature as may be requisite in each individual case.

b. English History (3 to 6 units).

c. A sound knowledge of at least one foreign language and its literature—ordinarily interpreted as requiring a minimum of 16 units in the chosen language, not including Latin 1, German 1, or French 1.

In general, students should include among their elected studies Latin (or Greek; not less than two years; or, in case Latin or Greek be selected to meet requirement *c* above, one modern foreign language) and Anglo-Saxon. The following are also specially recommended: English Bible, Logic, Introduction to Philosophy, Psychology of the Emotions and General Psychology, Lectures on Greek or Modern Art, Elements of Economics, and a course in some branch of Biology.

The Teacher's Recommendation

The minimum requirement, for students of any department, is as follows: Vocal Expression, 4 units; Composition, 4 units; Anglo-Saxon, 6 units; Chaucer (or 3 units of English

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*Absent on leave, 1906–07.

31), 3 units; Shakspere, 3 units; Milton (or Wordsworth, or Spenser), 3 units; Prosody, 2 units; Teacher's English, 4 units. Graduates of the English Department must accordingly add to the work required for a degree the courses in Anglo-Saxon, Prosody, and Teacher's English. Further, each candidate must be passed upon by vote of the Department before receiving the recommendation.

PRELIMINARY AND GENERAL COURSES

(Open to all students unless otherwise specified.)

1. **Principles of Vocal Expression.**—A general course in vocal training, the use of the voice in reading and speaking, and the elements of interpretative reading, with practice in the preparation and delivery of short speeches.

2 units, both semesters (BASSETT)

2. **English Composition** (formerly course 8.)—Practical work in narration, description, and exposition.

2 units, both semesters
(SEWARD, HALL, GRAY, BRIGGS, MANCHESTER, RUSSELL)

3. **Note Taking.**—Particulars to be announced.

1 unit, 1st semester

4. **Outline History of English Literature.**—[This course may not be given in 1907-08.]

3 units, both semesters (GRAY)

5. **English Prose Classics.**—Three or four English prose classics selected yearly for thorough study, with collateral reading of similar works in translation from other languages: as, Malory's Morte Darthur, with readings in the Nibelungenlied; Bacon's or Emerson's Essays, with readings in Montaigne or Plato; Johnson's Lives, with readings in Plutarch; Burke's Orations; Lamb's Essays, etc.

3 units, 1st semester
(HALL, GRAY, BRIGGS, MANCHESTER)

5b. **Prose Narrative Literature.**—A study of representative works of travel, biography, and fiction, illustrating the adaptation of method and style to the varying purposes of narrative literature. Open to first- and second-year students; to others by permission.

3 units, 2d semester (SEWARD, RUSSELL)

6. Introduction to Poetry.—A study of the nature, methods, and varieties of poetry, the elements of poetic form, and the elements of poetic criticism. Designed particularly for students who intend to pursue advanced work in literature.
3 units, 2d semester (HALL, GRAY, MANCHESTER)

9. English Bible.—[Not to be given in 1907-08.]

10. Shakspere.—A close study of selected plays of Shakspere, *with incidental lectures upon the British drama and* theater. Not open to first year students.
2 units, both semesters (NEWCOMER, BRIGGS)

ADVANCED AND SPECIAL COURSES

I. Vocal Expression

(Course 1 prerequisite.)

13. Vocal Training.—A study of the action of the imagination in the vocal interpretation of literature. [Not to be given in 1907-08.] 2 units, 1st semester (BASSETT)

14a. Vocal Interpretation of Lyric Poetry.—Practice in the oral rendering of selections from the English poets of the nineteenth century. Designed particularly for students who intend to teach English literature. [Not to be given in 1907-08.] 2 units, 1st semester (BASSETT)

14b. Vocal Interpretation of Dramatic Literature.—A careful analysis of two or three plays of Shakspere. Members of the class will vocally interpret characters and scenes assigned for individual study. Prerequisite: courses 1 and 14*a*. [Not to be given in 1907-08.]
2 units, 2d semester (BASSETT)

15. Public Speaking.—Practice in the preparation and delivery of speeches, with attention to the style of spoken discourse based on a study of masterpieces of oratory. Prerequisite: courses 1 and 2. [Not to be given in 1907-08.]
2 units, both semesters (BASSETT)

II. Written and Oral Expression

(Course 2 prerequisite.)

21. Library Work.—Particulars to be announced.

22. Narration.—The principles of invention and style in

their practical application to narrative art. Open by recommendation from course 2.
1 unit, both semesters (SEWARD)

23. **Exposition.**—Advanced course, open to a limited number of students. 2 units, 2d semester (HALL)

24. **Argument.**—Practice in the preparation and presentation of material in expository and argumentative form, with some study of models. Open to a limited number of students. 3 units, 1st semester (ALDEN)

25. **Oral Debate.**—Practice in the preparation and delivery of oral arguments, chiefly on current public questions. Open to a limited number of students who have taken, or are taking, course 24, to be admitted in the order of application.
2 units, both semesters (ALDEN, DUNIWAY, BASSETT)

28. **Teachers' Course in English.**—A study of the methods of teaching Composition (first semester) and Literature (second semester) in secondary schools. Open to students in senior year. 2 or 3 units, both semesters (SEWARD)

III. History and Interpretation of Literature

(Courses 2, 3, and 6 should, whenever contributory, precede the election of the following courses. The courses are designed more particularly to meet the needs of students of the English Department, but may be elected by others who have fulfilled the requirements in each individual case. Courses 33 to 38 are well adapted to the needs of the general student, and for these course 6 will not be insisted upon as a prerequisite.)

31. **Early History of English Literature.**—*a.* From the beginning to 1557 (first semester). *b.* From 1557 to the Restoration, 1660 (second semester). Open to fourth-year students. [In 1906-07 only the latter half of this course was given, by Assistant Professor BRIGGS.]
3 units, both semesters (ANDERSON)

32. **Later History of English Literature.**—*a.* From 1660 to 1740, the age of Dryden and the age of Pope (first semester). *b.* From 1740 to 1798, the age of Johnson and the early Romantic Revival (second semester). Open to third-year students. 3 units, both semesters (ALDEN, HALL)

33. **Early Nineteenth Century Literature: 1798-1832.**—The age of Coleridge, Byron, Scott, and the Reviewers. Open to students of all departments in third and fourth years. [Not given in 1906-07.] 2 units, 1st semester (ALDEN)

34. **Victorian Poets.**—*a*. Tennyson (first semester). *b*. Arnold, Rossetti, Morris, Swinburne (second semester). Lectures, discussions, and weekly papers. Open to third- and fourth-year students. [Not to be given in 1907-08.]
3 units, both semesters (NEWCOMER, BASSETT)

35. **Victorian Prose Writers.**—A study of critical tendencies in England in the nineteenth century, based chiefly upon the writings of Carlyle, Ruskin, Arnold, Pater, and Huxley. Open to second year students.
2 units, both semesters (NEWCOMER)

36. **American Literature.**—A survey of American literary history; lectures and reports. [Not to be given in 1907-08.]
3 units, 1st semester (BRIGGS)

37. **English Drama.**—English dramatic literature from its origin to the nineteenth century, omitting Shakspere. Open to third- and fourth-year students.
3 units, 2d semester (SEWARD, GRAY)

38. **The English Novel.**—A rapid historical survey of the origin and development of the English Novel, and the critical discussion of one novel each of Jane Austen, Scott, Dickens, Thackeray, George Eliot, and Hawthorne. Open to third- and fourth-year students.
2 units, both semesters (GRAY)

39. **Prosody.**—A study of the principles and history of English versification. Open to English students in the third and fourth years. 2 units, 2d semester (ALDEN)

[**Chaucer.**—See English Philology, course 2.]

40. **Shakspere: Advanced Course.**—Groups of plays are read in successive years, as indicated below. The student may elect any one or more of these groups. The plays in each group are selected with a view to the illustration of the scope and variety of the author's powers and of the development of his art.

1907: Henry IV, Parts I and II, Henry V, The Merchant of Venice, Othello, The Winter's Tale. [This group was given by Assistant Professor Alden.]

In 1907-08 this course will be given as a *Survey of the Whole Work of Shakspere*: two lectures and one hour for readings, discussions, and tests weekly. Open to advanced and recommended students of all departments. Course 10 is desirable as preliminary. 3 units, both semesters (Anderson)

42. **Milton: Paradise Lost.**—Open to students of English in the third and fourth years; to students of other departments in the fourth year. [Not given in 1906-07.]
3 units, 1st semester (Anderson)

43. **Wordsworth, Shelley, Byron, and Keats.**—Lectures and interpretations. [Not to be given in 1907-08.]
3 units, 1st semester, 2 units, 2d semester (Newcomer)

50. **Thesis.**—In connection with the more advanced courses in literature, the student may, by special permission of the instructor, undertake a piece of research, the results of which shall be embodied in a thesis.
1 unit, either semester (Anderson, Newcomer, Alden)

GRADUATE COURSES

The preliminary requirements for entrance upon a course for an advanced degree in English are:

a. The course for the degree of A. B. in English, or its equivalent.

b. An elementary knowledge of Anglo-Saxon.

c. A sound knowledge of two foreign languages (preferably one ancient and one modern language).

51. **The Development of English Prose.**—From the middle of the sixteenth century to the end of the eighteenth.
2 units, both semesters (Newcomer)

52. **Literary Criticism.**—The history of English literary criticism, from the Elizabethan age to that of Matthew Arnold. [Not to be given in 1907-08.]
2 units, both semesters (Alden)

53. **English Lyric.**—Studies in the lyric as a poetic form, and its development in England to the seventeenth century.
2 units, 1st semester (Alden)

[The work in courses 52 and 53 consists of lectures and seminary reports. These courses will ordinarily be given in alternate years.]

55. Modern Literature from Wordsworth to Ibsen.—A comparative study of the most notable poets, novelists, and dramatists of the nineteenth century, with especial reference to the expression of revolutionary and social action and reaction. Open to graduates and a limited number of recommended seniors. A good knowledge of at least one modern foreign language is indispensable.
2 units, both semesters (ANDERSON)

ENGLISH PHILOLOGY

EWALD FLÜGEL,* Professor.
RAYMOND MACDONALD ALDEN, SAMUEL SWAYZE SEWARD, JR., WILLIAM DINSMORE BRIGGS, Assistant Professors (Department of English Literature).

1. Anglo-Saxon.—*a.* Anglo Saxon Grammar and translation of select passages in prose (first semester). *b.* Translation of select passages in verse; outline of Historical English Grammar (second semester).
3 units, both semesters (SEWARD, BRIGGS)

2. Chaucer.—This course is an elementary one, and includes an outline of Middle English Grammar for the beginner.
3 units, 1st semester (ALDEN)

GRADUATE COURSES

[To be outlined in Announcement of Courses for 1907-08.]

BIBLICAL HISTORY AND LITERATURE

DAVID CHARLES GARDNER, Lecturer.

1. Life and Teaching of Christ.—The history of the life and times of Jesus, with a study of His words as recorded in the gospels and the application of His teaching to the life of to-day. Lectures, discussions, and papers.
½ to 1 unit, both semesters (GARDNER)

Absent on leave.

PHILOSOPHY

HENRY WALDGRAVE STUART,* Assistant Professor.
GEORGE HOLLAND SABINE,* Instructor.

1. **History of Philosophy.**
3 units, both semesters (SABINE)

2. **Logic.** 3 units, 2d semester (SABINE)

3. **Introduction to Philosophy.**
2 units, 1st semester (SABINE)

[Additional courses to be outlined in Announcement of Courses for 1907-08.]

PSYCHOLOGY

FRANK ANGELL, Professor.
LILLIEN JANE MARTIN,† Assistant Professor.
ESTHER CRANDALL, Assistant.

1. **General Psychology.**—Lectures and Exercises. Not open to first-year students.
5 units, 1st semester (ANGELL)

2. **Experimental Psychology.**—Lectures, one hour; laboratory, two hours. Students are recommended to take this course in connection with course 1.
2 units, both semesters (ANGELL)

3. **Psychology of Evidence.**—Open to those who have completed course 1, or its equivalent.
2 units, 2d semester (ANGELL)

4. **Advanced Laboratory Work in Psychology.**
3 units, both semesters (ANGELL, MARTIN)

5. **Psychology of the Emotions,** with special reference to the Fine Arts.—Open by permission to first-year students.
2 units, 1st semester (MARTIN)

6. **Psychology of the Social Relations.**—Open by permission to first-year students.
2 units, 2d semester (MARTIN)

7. **Current Psychological Literature.**—In this connection a

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*Beginning August, 1907.
†Absent on leave, 1906-07.

sub-section for the purpose of reading German Psychology will be formed, if so desired.

1 unit, both semesters (ANGELL)

8. Systematic Psychology.

2 units, 1st semester (MARTIN)

9. Research Work.—Hours and conditions to be arranged. (ANGELL)

EDUCATION

ELLWOOD P. CUBBERLEY, Professor.
HENRY SUZZALLO, Assistant Professor.
FRANK ERNEST THOMPSON, Instructor.
REBECCA BEATRICE FRENCH, Assistant.
MORRIS ELMER DAILEY,* Lecturer.

The Department of Education offers three main lines of work:

1. Courses of a general nature on the history, function, and administration of public education, and intended in part as information courses for the general university student and without reference to the work of teaching. To such students courses 1, 2, 3, 5, and 10 are recommended.

2. Courses intended to assist other departments in preparing for work in secondary schools. All such students should confer with members of the Department as to courses, but in general courses 1, 6, and 7 should be included if the candidate has not had experience in teaching.

3. Courses primarily for major students, or those making Education a minor, and intended to give special preparation to (*a*) those who desire to become teachers of Education in normal schools or colleges, (*b*) those who wish to prepare for supervisory or administrative positions in the public schools, and (*c*) those who wish to prepare for special work in the elementary field.

The courses in Education are open to all students as electives or as minor subjects, but only those who desire to prepare for one of the lines of work mentioned above under (3), and whose preparation and experience are satisfactory to the Department, will be accepted as major students. In special cases those without teaching experience may be accepted as major students, but all such must be approved in practice teaching (course 21) before graduation.

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*For 1907-08.

Major students begin their work in Education with the sophomore year, taking courses 1, 2, and 3.

1. **Public Education in America.**—A study of the province and problems of public education in the United States. An introductory course. Lectures, following a syllabus, with assigned readings. Open to second-year students.
2 units, 1st semester (CUBBERLEY)

2. **Public Education in Europe.**—A study of the nature and conditions of education in a few of the leading European states, compared with education in the United States. Lectures, following a syllabus, with assigned readings. Presupposes course 1. 2 units, 2d semester (CUBBERLEY)

3. **History of Education in Europe.**—Lectures, following a syllabus, with assigned readings. A study of the development of educational ideals and systems from the time of the Greeks and Hebrews to the present, with particular reference to the forces which have operated in the evolution of the various historic ideals and schools. The first semester covers the period up to the Reformation, and the second semester the period from the Reformation to the present. Either semester may be taken separately. Open to second-year students. 3 units, both semesters (SUZZALLO)

4. **Sources for the History of Education.**—A more extensive and intensive study of the sources for the History of Education in Europe than is undertaken in connection with course 3. This course may be taken in connection with course 3, or subsequently, but cannot precede it. [Course 4 alternates with course 13, and will not be given in 1907-08.]
2 units, both semesters (SUZZALLO)

5. **History of Education in America.**—Lectures, with assigned readings and reports. A study of the development of educational ideals, systems, and methods from the earliest colonial period to the present, with particular reference to the growth and extension of public education in the United States. The first semester covers the colonial period, and

the second semester the national period. Either semester may be taken separately.

2 units, both semesters (SUZZALLO)

6. **Principles of Education.**—A study of the more important educational and psychological principles which underlie the work of teaching, with special reference to their application. Intended primarily for major students, and for those preparing for the teacher's recommendation. Open to juniors, seniors, and graduate students.

2 units, both semesters (THOMPSON)

7. **Secondary Education.**—Lectures, assigned readings, and reports. A study of the organization, scope, and method of public and private secondary schools in America, and including a consideration of the preparatory, cultural, commercial, technical, and industrial aspects of secondary education. Intended primarily for and required of those preparing for the high school teacher's certificate. Open to seniors and graduates only. 3 units, 1st semester (THOMPSON)

8. **Public Education—Advanced Course.**—A pro-seminar, involving a more advanced and intensive study of the problems of public education than in courses 1 and 2. Open, by permission of the instructor, to those who have taken the prerequisite courses.

2 units, both semesters (CUBBERLEY)

9. **City School Administration.**—A study of some of the more important features and problems of city school administration, with a view to the establishment of principles. Open to advanced students, and intended primarily for those preparing for administrative work. [Course 9 will not be given during 1907-08.]

2 units, both semesters (CUBBERLEY)

10. **State School Administration.**—A study of the educational principles underlying the proper administration of school systems in states and counties, and involving a comparative study of the school laws and school systems of the various American states. The course includes a study of such topics as Federal and State policy, forms of control, revenue and its apportionment, the State and the teacher, the State and the child, private and sectarian education, and state oversight and control. Open to third-year students.

3 units, both semesters (CUBBERLEY)

11. **Principles of General Method.**—A critical study of some of the recent contributions to educational literature, and the application of the principles to class-room work. Open only to teachers of experience.
3 units, 2d semester (THOMPSON)

12. **Courses of Study for Elementary Schools.**—A study of the more fundamental principles of education, with reference to their application to the formation and administration of courses of study for elementary schools. Each member of the class will carry on a special study in some one subject of the elementary curriculum. Open only to teachers of experience. 2 units, both semester (THOMPSON)

13. **Current Educational Theories.**—Assigned readings and reports, followed by discussion. A pro-seminar, open only to advanced students. [Alternates with the first semester of course 4, and will be given during 1907-08.]
2 units, 1st semester (SUZZALLO)

14. **Theory of the Training of Teachers.**—Assigned readings, followed by discussion. A pro-seminar, open only to advanced students, and intended primarily for those entering on the work of training and supervising teachers. [Alternates with the second semester of course 4, and will be given during 1907-08.] 2 units, 2d semester (SUZZALLO, DAILEY)

18. **Thesis Work.**—In certain courses, students may be given an additional hour of credit on presentation of a satisfactory thesis on an assigned topic and embodying the results of independent work. The consent of the instructor is necessary before registering. 1 unit, both semesters

19. **Special Courses.**—Special work in independent research will be provided for students prepared to do advanced work, the nature of the investigation being determined by the student's preparation and needs. Such work will include studies in administation, educational history, and the curriculum.
To be arranged (CUBBERLEY, SUZZALLO, THOMPSON)

20. **Journal Club.**—Regular meetings of instructors and advanced students for the discussion of new books and current literature.
1 unit, both semesters (CUBBERLEY, SUZZALLO, THOMPSON)

21. **Practice in Teaching.**—Actual practice in the handling

of classes and the giving of instruction, with accompanying conferences, is now required of all inexperienced candidates for the High School Teacher's Certificate. This work may be taken at the San Jose State Normal School, which makes special arrangements for the graduates of this University, or at any other California State Normal School. Hours for teaching and conferences must be arranged with the Normal School. 4 units, either semester (DAILEY)

COURSES IN OTHER DEPARTMENTS

The following special Teachers' Courses in other departments are recommended to students preparing to teach. Such courses are usually required as a part of the prescribed work for the departmental recommendation, but do not count again as a part of the required hours in Education.

a. **Teachers' Course in Greek.**—[Course 17 in the Department of Greek.] 2 units, 2d semester (MURRAY)

b. **Teachers' Course in Latin.**—[Course 17 in the Department of Latin.] 2 units, 2d semester (ELMORE)

c. **Teachers' Course in German.**—[Course 14 in the Department of Germanic Languages.]
2 units, 1st semester (COOPER)

d. **Teachers' Course in French.**—[Courses 20 and 21 in the Department of Romanic Languages.]

e. **Teachers' Course in English.**—[Course 28 in the Department of English.] 2 units, 1st semester (SEWARD)

f. **Teachers' Course in History.**—[Course 16 in the Department of History. 2 units, 2d semester (SHOW)

g. **Teachers' Course in Drawing.**—[Course 10 in the Department of Drawing.] 2 units, 2d semester (CLARK)

h. **Teachers' Course in Elementary Physics.**—[Course 13 in the Department of Physics.]
1 unit, both semesters (SANFORD)

THE HIGH SCHOOL TEACHER'S CERTIFICATE

[For regulations governing recommendations for the High School Teacher's Certificate, see pp. 78-80.]

HISTORY

MAX FARRAND, ARLEY BARTHLOW SHOW, EPHRAIM DOUGLASS ADAMS, Professors.
CLYDE AUGUSTUS DUNIWAY, Associate Professor.
HENRY LEWIN CANNON, Assistant Professor.
PAYSON JACKSON TREAT,* Instructor.

With permission of their major departments, students may register for one unit less than the regular credit in courses 4, 5, 7, 9, and 17, and be excused from supplementary reading.

1. **Historical Training Course.**—A practical course in the finding and handling of historical material. Required of first-year History majors.
1 unit, both semesters (CANNON, FARRAND)

2. **Historical Training Course.**—A continuation of course 1. Required of second-year History majors.
1 unit, both semesters (CANNON, FARRAND)

[**History of Greece.**—See Greek 10.]

[**History of Rome.**—See Latin 29.]

3a. The Early Middle Ages, 476-1095.—A general course, open to all students who have had one year in ancient history, or a satisfactory equivalent.
3 units, 1st semester (SHOW)

3b. The Later Middle Ages, 1095-1492.—A continuation of course *3a*. Open to all students who have had course *3a*, or a satisfactory equivalent. 3 units, 2d semester (SHOW)

4a. English History to 1485.—General outline course, open to first-year students. 3 units, 1st semester (CANNON)

4b. English History since 1485.—A continuation of course *4a*. 3 units, 2d semester (CANNON)

5a. Modern European History, 1500-1715.—A general outline course, open to students who have had courses *3a* and *3b*, or a satisfactory equivalent.
2 units, 1st semester (ADAMS)

5b. Modern European History, 1715-1900.—A continuation of course *5a*. 2 units, 2d semester (ADAMS)

6. American Colonial and Revolutionary History to 1783.—

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*Absent on leave.

Open to students who have taken courses *4a* and *4b*, or a satisfactory equivalent.
3 units, both semesters (DUNIWAY)

7. **United States History, 1783-1844.**—Open to students who have taken courses *4a* and *4b*, or a satisfactory equivalent. [Not given in 1906-07.]
3 units, 1st semester (FARRAND)

8. **Constitutional and Political History of the United States since 1844.** A continuation of course 7. [Not given in 1906-07.] 3 units, 2d semester (DUNIWAY)

[Courses 7 and 8 will alternate with course 6. Together they will afford a survey of the field of American History.]

9. **The Westward Movement in United States History.**—The influence of the West upon the development of the United States. Not open to first-year students.
3 units, 2d semester (FARRAND)

10. **Pacific Slope History.**—Open to all but first-year students. [Not given in 1906-07.]
3 units, 1st semester (DUNIWAY)

11a. **English Constitutional History.**—Open to students who have taken courses *4a* and *4b*. [Not given in 1906-07.]
2 units, both semesters (CANNON)

11b. **England since 1754.**—A lecture course open to students who have had *4a* and *4b*, or a satisfactory equivalent.
2 units, 1st semester (CANNON)

11c. **English Colonization and Empire.**—A continuation of course 11*b*. 2 units, 2d semester (CANNON)

12. **Empire and Papacy in Middle Ages.**—Open to third-year students who have taken courses *3a* and *3b*. Subject in 1906-07, "The Investiture Struggle."
2 units, 1st semester (SHOW)

14. **Italian Renaissance.**—Open to third-year students who have taken courses *3a* and *3b*. Subject in 1906-07, "Dante and His Times." 1 unit, 2d semester (SHOW)

15. **Europe since 1789.**—A selected subject for some particular period is studied. The subject for 1905-06 was "English Parliamentary Opinion on the American Civil War." Open to third-year students who have taken courses *5a* and *5b*.
2 units, both semesters (ADAMS)

16. **Teachers' Course.**—Lectures, recitations, and practice covering the topics in history customarily taught in preparatory schools. 2 units, 2d semester (SHOW)

17. **Modern Constitutional Governments.**—A general course, open to all students.
3 units, both semesters (DUNIWAY)

18. **Diplomatic History of the United States.**—Primarily for third- and fourth-year students, who must have had at least two courses in modern history. [Not given in 1906-07.]
3 units, 1st semester (DUNIWAY)

19. **International Law.**—Primarily for third- and fourth-year students, who must give evidence of a fair knowledge of modern history. It is mainly a study of the leading cases, with class discussion to develop (1) a statement of the general principles of international law, and (2) an outline of the history of the subject. [Not given in 1906-07.]
3 units, both semesters (DUNIWAY)

20. **Oral Debate.**—Open to a limited number of advanced students, and should be preceded by English 15. The course is intended to give training in the preparation of oral arguments on public questions in the fields of history, politics, economics, and sociology, and to afford experience in public speaking, with the benefit of criticism by the instructors.
2 units, both semesters (DUNIWAY, ALDEN, BASSETT)

21. **Historical Composition.**—Every student taking history as a major subject, unless taking course 1, is required to register with some instructor in the department for regular training in the gathering, critical handling, and presentation of historical material. The exact method to be followed will be determined by the instructor according to the needs of the individual student. 1 unit, each semester

22. **Historical Bibliography and Criticism.**—Open to third- and fourth-year students.
2 units, 1st semester (FARRAND)

ADVANCED COURSES

Intended primarily for graduate students, but open to advanced undergraduates, with permission of the instructors.

27. **Painting of the Italian Renaissance.**—A practical study of one or more great Renaissance artists. Subject for 1906-07, "Giotto." Ability to read German and French is desirable. 1 unit, 1st semester (SHOW)

28. **Mediaeval Institutions.**—A practical study of select feudal documents. Ability to read Latin, German, and French is required. 1 unit, 2d semester (SHOW)

29. **English Constitutional History.**—Subject in 1905-06, "The Magna Charta." 2 units, 2d semester (CANNON)

30. **Eighteenth Century English History.**—Subject in 1906-07, "The Internal Affairs of England Under William Pitt."
2 units, 2d semester (CANNON)

31. **English Diplomatic History.**—Subject in 1905-06, "The Attempt at European Coalition After the Peace of Campo Formio, 1797-1798." Reading ability in French required.
2 units, both semesters (ADAMS)

32. **Constitutional History of the United States.**—Subject for 1906-07, "Formation of the Federal Constitution."
2 units, each semester (FARRAND)

33. **The Westward Movement.**—Subject for 1906-07, "The American Occupation of California."
2 units, each semester (FARRAND)

34. **Later American History.**—Critical examination of selected topics. [Not given in 1906-07.]
2 units, 2d semester (DUNIWAY)

35. **English Colonization in Australia.**—The work in this course takes up some topic in connection with the early history of Australia, and is conducted on lines of individual study. 3 units, both semesters (ADAMS)

37. **Seminary in Later United States History.**—Subject for 1905-06, "Federal Relations of the Pacific States." [Not given in 1906-07.] 2 units, both semesters (DUNIWAY)

38. **Seminary in Pacific Slope History.**—Subject for 1906-07, "Federal Relations of California."
2 units, both semesters (DUNIWAY)

ECONOMICS AND SOCIAL SCIENCE

ALLYN ABBOTT YOUNG, THORSTEIN VEBLEN, ALBERT CONSER WHITAKER,* Associate Professors.

HARRY ALVIN MILLIS, JAMES MARVIN MOTLEY,† Assistant Professors.

IRA BROWN CROSS, Assistant.

The courses offered by the Department of Economics and Social Science fall into two general groups. The elementary courses (1-12) are designed for the general student as well as for those specializing in the department, and include discussions of the more important contemporary economic and social problems—the understanding of which is believed to be a condition of good citizenship. The advanced and graduate courses offer to properly prepared students opportunities for the intensive study of special problems and for training in the methods of investigation used by economic science.

While no attempt is made to offer technical training in business methods, students looking forward to a business career will find courses 1, 4, 5, 6, 8, and 11 valuable as affording a survey of important business institutions and relations. An endeavor is made, however, to render some of the courses offered by the department of direct technical value to students planning to enter the government service, or to engage in the work of public or private institutions for social betterment.

1. **Elements of Economics.**—A descriptive course, constituting an introduction to the subject. Must precede all other courses in the department. Two lecture hours and one quiz hour each week. 3 units, both semesters (YOUNG)

2. **Principles of Economics.**—An intensive study of the principles of economics as developed in course 1. Required of Economics majors.
2 units, both semesters (MILLIS)

3. **Industrial and Social History of England.**—The several stages in the industrial development of England will be studied, particular attention being given to the Industrial Revolution and to the modern capitalistic system.
3 units, 1st semester (MOTLEY)

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*Absent on leave, 1906-07.

†Beginning August, 1907.

4. **Money and Banking.**—Forms and laws of money; the money question. Credit and banking: the money market and foreign exchanges.
3 units, both semesters (WHITAKER)

5. **Railway Transportation.**—Development of the American railway system, railway finance, railway statistics; theory of rates, methods of public control in Europe, Australasia, and America. 3 units, both semesters (YOUNG)

6. **The Corporation and Trust Problem.**—Elementary survey of corporation law; history of corporations and corporate combinations, pools and trusts, in relation to public policy; present tendencies in legislative control.
2 units, both semesters (WHITAKER)

8. **Public Finance.**—A general course dealing chiefly with the principles underlying public expenditures, revenues, debts, and financial administration.
3 units, 1st semester (MILLIS)

10. **Financial History of the United States.**—The federal finances, the tariff policy, and the monetary and banking history of the United States. 3 units, 2d semester (MOTLEY)

11. **The Labor Problem.**—The modern industrial system, wage system, collective bargaining, and other features of trade unionism, strikes, boycotts and lock-outs, arbitration and conciliation. 3 units, 1st semester (MILLIS)

11a. **Methods of Economic Reform.**—A continuation of course 11, which the student must have completed. The treatment of the unemployed, workingmen's insurance, profit-sharing, co-operation, and socialism, will be studied.
3 units, 2d semester (MILLIS)

12. **Charities.**—The causes and effects of pauperism will be studied, methods of its treatment and prevention will be examined, and the responsibility of society at large in this regard will be considered.
3 units, both semesters (MOTLEY)

ADVANCED AND GRADUATE COURSES

14. **Economic Theory.**—The theory of value and distribution. 2 units, both semesters (WHITAKER)

15. American Methods of Taxation.—An intensive study of the federal and state taxes, including the customs and internal revenue duties, "direct" income, business and inheritance taxes, the general property and corporation taxes. Should be preceded by Economics 8.
3 units, 2d semester (MILLIS)

16. History of Political Economy.—A survey of the growth of economic theories and opinions in modern times, together with an inquiry into the character and methods of current economic science. Prerequisites: courses 1, 2, and 3.
3 units, both semesters (VEBLEN)

17. History of Socialism.—The history of Socialism and allied social movements, with an account of the present status of Socialism in Europe and America.
3 units, 1st semester (VEBLEN, CROSS)

18. Socialism.—Socialistic doctrines in the nineteenth century, with special reference to the theories of Karl Marx and his followers. Prerequisites: courses 1, 2, 3, and 17.
3 units, 2d semester (VEBLEN)

19. Economic Factors in Civilization.—The bearing of economic motives and conditions upon the development of culture, art, religion, science, and the institutions of domestic and civic life. 3 units, 1st semester (VEBLEN)

20. Seminary in Statistics.—Investigation of selected social and economic problems with special reference to the use of the statistical method. [Given in 1906-07 and alternate years.]
2 units, both semesters (YOUNG)

21. Seminary in Railway and Corporation Finance.—Study of the financial policies of selected corporations, with special reference to the relation of such policies to the public interest. Prerequisites: courses 5 and 6. [Given in 1907-08 and alternate years.] 2 units, both semesters (YOUNG)

22. Economic Conference.—Bi-weekly meetings of instructors and graduate students for discussion of current economic literature and the presentation of the results of original research.

LAW

NATHAN ABBOTT,* CHARLES HENRY HUBERICH, FREDERIC CAMPBELL WOODWARD,† Professors.

ARTHUR MARTIN CATHCART, Associate Professor.

WESLEY NEWCOMB HOHFELD, Assistant Professor.

JOSEPH WALTER BINGHAM, †Acting Assistant Professor.

LEON PATTESON LEWIS, ‡ CHARLES ANDREWS HUSTON, Instructors.

GEORGE HENRY BOKE, § Lecturer.

The Department of Law‖ offers the following courses:

(*a*) A course leading to the degree of Bachelor of Arts (A. B.).

This is the regular undergraduate course for students who enter the University intending to make Law their major study. (For entrance requirements see pp. 36-62.) This course ordinarily occupies four years and requires that the student obtain 120 units of university credit. Of this time the equivalent of three years (91 units of credit) is given to general culture studies, and one year (29 units of credit) to the professional study of Law.

The selection of topics and the number of hours of study to be taken at any one time in this as in all the other courses in the Department is under the direction and subject to the approval of the Department Faculty.

The 120 unit-hours of work usually are apportioned as follows: To the first and second years, 30 units of general culture studies each; to the third year, 16 units of general culture studies and three courses in law; to the fourth year, 16 units of general culture studies and three courses in law. The 91 unit-hours may be taken in three years, and the fourth year devoted entirely to law study. No student in this course can begin the professional study of law until he has received credit for at least 50 unit-hours.

In arranging courses in general culture subjects it is expected that 60 units will be applied as follows: To Latin, 4; to either French, German, or Spanish, 6; to English 10; to

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*Resigned February, 1907.

†Beginning August, 1907.

‡Resigned to take effect August 1, 1907.

§For 1906-1907.

‖The Department of Law of Leland Stanford Junior University is a member of the Association of American Law Schools.

History, 15; to Economics, 13; to Mathematics, 6; and to one of the sciences, 6. English Composition (English 2) is required of all candidates for degrees and of special students who desire a certificate.

(*b*) A course leading to the degree of Juris Doctor (J. D.). This course is open to students who have received the degree of Bachelor of Arts or an equivalent degree from this University or some other institution of recognized collegiate rank. Course (*b*) is a continuation of course (*a*), and with it constitutes a full professional course in law. Those students who have taken course (*a*) may complete course (*b*) in two additional years. Those who have a bachelor's degree from this or some other institution of recognized rank but have no credit in law will require three years.

(*c*) Special students and students having regular undergraduate standing, but who are not candidates for a degree and who are 21 years of age, may, by special permission, enter upon the professional study of law without satisfying the requirements as to culture courses. This course will afford preparation for the usual examination for admission to the bar, excepting as regard matters of local practice, but will not lead to any degree. The University, upon recommendation of the Department, will issue a Certificate to those students who complete the three years' course of professional study without fulfilling the requirements for any degree.

Work in Law Done Elsewhere

Except by the special permission of the Faculty of Law credit received for work in Law done elsewhere will be accepted towards a degree only after satisfactory examination in all the subjects offered. But students with credit in Law received elsewhere may be admitted provisionally to such courses as their previous work seems to justify.

Examinations

Students are given credit only after passing written examinations at the end of each course. By special permission these examinations and examinations for advanced standing may be taken elsewhere. Application for such examinations should be made not later than April 1, for the spring examinations, and November 15, for the winter examinations. A fee of $5 per topic is charged for these examinations. Examinations to remove conditions are held only at the time of the next regular examination given in the subject in which the condition was incurred.

Degrees

Undergraduates whose major subject is Law, on receiving credit for the first-year law courses, English 2, and satisfying all other University requirements, will be given the degree of Bachelor of Arts (A. B.).

Students who have received the degree of Bachelor of Arts or its equivalent, from this or from some other institution of recognized collegiate rank, and who have received credit for eighty-one units in Law (exclusive of courses 1 and 34), chosen under advice of the Faculty of Law, will be given the degree of Juris Doctor (J. D.).

Courses of Instruction

PRELIMINARY COURSE

1. **Elementary Law.**—An introductory lecture course dealing with the nature of law and its relation to allied subjects. The principal topics studied in the succeeding law courses are outlined and illustrated; and practice in the use of digests, reports, and text-books is begun. Open to any student in the University having twenty units credit, and to special students. 2 units, both semesters
(HUBERICH, WOODWARD, DUNIWAY, CATHCART, HOHFELD, HUSTON)

FIRST-YEAR COURSES

2. **Contracts.**—Offer and acceptance; consideration; contracts under seal; contracts for the benefit of third persons; assignments; joint and several contracts; the Statute of Frauds; conditions; impossibility; illegality; discharge of contracts. Open to students having 50 units credit, and to special law students. Text-book: Williston's Cases on Contracts. 3 units, both semesters (WOODWARD)

3. **Criminal Law and Procedure.**—Nature and sources of criminal law; crime as an act; attempts; criminal intent; circumstances affecting illegality of act; specific offenses: crimes against the person, larceny and allied offenses, crimes against the dwelling house, conspiracy; criminal procedure. Open to law students having 50 units credit, and to special law students. Text-book: Beale's Cases on Criminal Law.
4 units, 2d semester (HUBERICH)

4. **Torts.**—Trespass to person, to real property, and to personal property; excuses for trespass; conversion; legal cause; negligence; contributory and imputed negligence; plaintiff's illegal conduct as a defense; duties of land-owners; hazardous occupations; liability for animals; deceit; defamation, slander, libel, privilege, malice; malicious prosecution, criminal and civil; interference with social and business relation, inducing breaches of duty, fair and unfair competition, strikes, boycotts, business combinations. Open to students having 50 units credit, and to special law students. Text-book: Ames and Smith's Cases on Torts, Vols. I and II and Supplement. 5 units, 1st semester (CATHCART)

5. **Property I.**—Distinction between real and personal property; acquisition of rights in personal property; gifts; bailment; lien; pledge. Real property: tenures; estates; seisin and conveyance; Statute of Uses; incidents of ownership in real property; fixtures; profits; natural rights; easements; covenants as to use; public rights; franchises; rents. Open to law students having 80 units credit including two courses in law, and to special or graduate students. Text-book: Gray's Cases on Property, Vols. I and II (2d ed.).
3 units, both semesters (BINGHAM)

6. **Equity I.**—Historical development of equity; general principles relating to jurisdiction, procedure and remedies; specific performance of contracts with special emphasis on the relations between vendors and purchasers of realty; certain essentials of the law of mortgages; bills for accounting; specific reparation and prevention of torts, including waste, trespass, nuisance, disturbance of easements, infringement of patents and copyrights, interference with business relations. Open to law students having 80 units credit including two courses in law, and to special or graduate students. Text-book: Ames's Cases in Equity Jurisdiction, Vol. I.
4 units, 2d semester (HOHFELD)

7. **Agency.**—Nature of relation; appointment; liabilities of principal; torts, contracts, crimes; liabilities of agent; parties to writings; undisclosed principal; obligations between principal and agent; delegation of agency; termination; ratification. Open to law students having 80 units credit and two courses in law, and to special or graduate students. Text-book: Wambaugh's Cases on Agency.
4 units, 1st semester (HUSTON)

SECOND YEAR COURSES

8. **Bills and Notes.**—This course considers all types of negotiable paper, and discusses in detail the law of bills of exchange, notes, and checks, including: formal requisites; acceptance; indorsement; transfer; extinguishment; obligation of parties; diligence; specialty character; the effect of the Negotiable Instruments Law. Open to second- and third-year law students, and to others by special permission. Text-book: Ames's Cases on Bills and Notes. [Omitted in 1907-08; to be given in 1908-09.]
4 units, 1st semester (HUBERICH)

9. **Damages.**—This course deals with the functions of court and jury in estimating damages; exemplary, liquidated, nominal, direct, and consequential damages; avoidable consequences; counsel fees; certainty, compensation, damages for non-pecuniary injuries; value; interest; and damages in certain actions of tort and contract. Open to second- and third-year law students. Text-book: Beale's Cases on Damages. [Omitted in 1907-08; to be given in 1908-09.]
2 units, 1st semester (CATHCART)]

10. **Equity II: Trusts.**—Nature and requisites of trusts with reference to consideration, subject-matter, the trustee, the cestui que trust; language necessary for the creation of trusts; kinds of trusts: express trusts, constructive trusts, resulting trusts, charitable trusts; transfer of the respective interests of the trustee and cestui que trust by act of party and by death, marriage, etc.; extinguishment of trusts; resignation or removal of trustee; duties of trustee as to the general execution of the trust and as to the investment of the trust funds. Open to second- and third-year law students. Text-book: Ames's Cases on Trusts (2d ed.).
4 units, 1st semester (HOHFELD)

11. **Equity III.**—Interpleader; bills of peace and quia timet; cancellation of contract; clouds on title; perpetuation of testimony; rights of future enjoyment; reformation and rescission of contract: mistake, fraud, misrepresentation; duress and undue influence. Open to second- and third-year law students. Text-book: Ames's Cases in Equity Jurisdiction. Vol. II. 2 units, 1st semester (HUSTON)

12. **Insurance.**—Marine, fire, and life insurance. Insurable interest in various kinds of policies; concealments; misrepre-

sentations; warranties and other matters affecting the validity of the contract; amount of recovery; subrogation, waiver, estoppel, election, powers of agents; assignees and beneficiaries. Open to second-year law students and to others by special permission. [Not to be given in 1908-09.] Text-book: Wambaugh's Cases on Insurance.

3 units, 2d semester (HUSTON)

13. **Partnership.**—Nature of a partnership, its purposes, and members; creation of partnerships; nature of partner's interest; firm name and good will; mutual rights and duties of partners; actions between partners, at law and in equity; powers of partners; liability for acts of partners in contract and tort; general liability of partners; dissolution and notice; consequences of dissolution; dissolution agreements respecting debts; distribution of assets to creditors, and between partners; limited partnerships. Open to second- and third-year students. Text-book to be announced.

3 units, 2d semester (WOODWARD)

14. **Persons.**—Infancy: period of infancy; voidable acts, disaffirmance, ratification; contracts for necessaries; obligations created or authorized by law; liability for tort; guardian and ward. Marriage: promise to marry; marriage contract at common law and under statutes; rights of husband and wife in each other's property; status of married women; transactions between husband and wife; torts affecting marital relations; separation; divorce. Parent and child: custody; services and earnings; torts to children; torts by children; adoption; illegitimacy. Open to second- and third-year students. [Not to be given in 1908-09.] Text-book: Woodruff's Cases on Domestic Relations (2d ed.).

2 units, 2d semester (CATHCART)

15. **Pleading and Practice I.**—Procedure at common law. Original writs and process; development of the common law actions; modes of trial; declarations; demurrers; dilatory pleas; pleas in bar; rules of pleading; motions based upon the pleadings. Open to second- and third-year law students. Text-book: Keen's Cases on Pleading.

2 units, 1st semester (CATHCART)

16. **Property II.**—Acquisition of real estate inter vivos; original acquisition, lapse of time, the form of conveyances, covenants for title, execution of deeds, estoppel, the prop-

erty conveyed; acquisition of property on the death of former owner, escheat, descent, occupancy, gifts mortis causa; the making, revocation and republication of wills, probate and administration, payment of legacies and distribution, ademption and lapse of legacies. Open to second- and third-year law students. Prerequisite: course 5. Text-book: Gray's Cases on Property, Vols. III and IV (2d ed.).
4 units, 1st semester (BINGHAM)

17. **Public Service Companies.**—The nature, rights, and obligations of public calling as exemplified by railway, telegraph, telephone, gas, water, irrigation and other public service companies. Open to second- and third-year law students, and to others by special permission. Text-book: Beale & Wyman's Cases on Public Service Companies.
2 units, 2d semester (CATHCART)

18. **Quasi-Contracts.**—Sources, extent, and nature of the obligation; distinctions between quasi-contract and pure contract and between quasi-contract and tort; obligation arising from benefits conferred in the absence of contract; obligation arising from benefits conferred under a contract but without the receipt of an equivalent. Open to second- and third-year law students. Text-book: Scott's Cases on Quasi-Contracts. 3 units, 2d semester (CATHCART)

19. **Sales.**—Subject matter of sale; executory and executed sales; bills of lading and jus disponendi; stoppage in transitu; fraud; factor's acts; warranty and remedies for breach of warranty; Statute of Frauds. Open to second- and third-year law students. Text-book: Williston's Cases on Sales (2d ed.). 3 units, 1st semester (WOODWARD)

THIRD-YEAR COURSES

20. **Administrative Law, and Public Officers.**—Administrative regulations; jurisdiction, discretion, adjudication; enforcement of orders, habeas corpus; mandamus; certiorari; equitable jurisdiction in public law. Open to third-year law students. Text-books: Goodnow's Cases on the Law of Officers, and Goodnow's Cases on Government. [Omitted in 1907-08; to be given in 1908-09.]
3 units, 1st semester (HUSTON)

21. **Admiralty.**—Admiralty jurisdiction, basis; maritime contracts, torts, and crimes; maritime liens, ex contractu, ex

delicto, priorities, discharge; bottomry and respondentia obligations; salvage; general average. Open to second- and third-year law students. Text-book: Ames's Cases on Admiralty. [Omitted in 1907-08; to be given in 1908-09.]
2 units, 2d semester (HUSTON)

22. **Bankruptcy.**—Jurisdiction of the United States and the States; who may be a bankrupt; who may be petitioning creditors; acts of bankruptcy; what property passes to the trustee; provable claims; protection, exemptions and discharge. Open to third-year law students. Text-book: Williston's Cases on Bankruptcy. 2 units, — semester (WOODWARD)

23. **Conflict of Laws.**—Nature and force of foreign law; comity; jurisdiction over persons and things; jurisdiction of courts; creation of personal rights and of rights of property; torts and contracts; enforcement of rights. Open only to third-year law students. Text-book: Beale's Cases on Conflict of Laws. 4 units, 2d semester (HUBERICH)

24. **Constitutional Law.**—Nature and sources of American constitutional law; adoption and amendment of constitutions; separation of powers; power of judiciary to declare acts of the legislative and executive branches of government unconstitutional; citizenship; privileges and immunities of citizenship; due process of law; police power; eminent domain; taxation; ex post facto and retroactive laws; laws impairing the obligation of contracts; regulation of commerce; money; war; government of territories. Open to third-year law students and to well-prepared fourth-year students in History, Economics and Political Science. Text-book: Thayer's Cases on Constitutional Law.
3 units, both semesters (HUBERICH)

25. **Evidence.**—Respective functions of judge and jury; "law and fact;" presumptions; burden of proof; judicial notice; kinds of evidence; relevancy as primary test of admissibility; principles and rules of exclusion relating to the following: evidence consisting of misleading or unimportant matters, evidence of character, admissions, confessions, hearsay, opinion evidence including expert testimony, real evidence, evidence relating to execution, contents and interpretation of writings; various rules of substantive law stated in terms of "parol evidence rule;" competency of witnesses; privilege of witnesses; examination of witnesses; impeach-

ment of witnesses. Open to second- and third-year law students. Text-book: Thayer's Cases on Evidence (2d ed.).
3 units, both semesters (HOHFELD)

26. **Mortgages.**—Essential elements of legal and equitable mortgages, rights of mortgagor and mortgagee at law and in equity; title, possession, dower, curtesy, waste, priorities, collateral agreements, foreclosure, redemption; extension, assignment, and discharge of mortgages. Open to second- and third-year law students. Text-book: Wyman's Cases on Mortgage (2d ed.). 2 units, 2d semester (BINGHAM)

27. **Municipal Corporations.**—General nature; corporate capacity; self government; creation, annexation, division, dissolution, succession; modes of action, ratification and curative acts; estoppel by recitals; municipal police power; local improvements and services, including special assessments; municipal property especially public streets; municipal contracts; expenditure and donations; indebtedness and its constitutional limit; liability. Open to third-year law students and to others by special permission. Text-book: Smith's Cases on Municipal Corporations, and selected cases. [Omitted in 1907-08; to be given in 1908-09.]
3 units, 2d semester (HUSTON)

28. **Pleading and Practice II.**—Code pleading. Historical development of the reformed procedure; the single civil action; parties to actions; the complaint; the answer; the reply; motions and demurrers. Open to second- and third-year law students. Text-book to be announced.
2 units, 2d semester (WOODWARD)

29. **Pleading and Practice III.**—Organization and jurisdiction of courts; court records and files; proceedings prior to judgment, including: service and return of summons and motions relating thereto, appearances, provisional remedies, such as attachment, arrest, etc., lis pendens, the trial, exceptions and findings, verdict; the judgment, its entry and satisfaction; proceedings subsequent to judgment, including: stay of execution, costs, execution, motion for new trial, appellate proceedings; special proceedings, including writs of certiorari, mandamus, and prohibition. Prerequisite: courses 15 and 28. During 1907-08 this course may be taken concurrently with course 28. Open to second- and third-year law

students. Text-book: California Code of Civil Procedure; also selected cases. 2 units, 2d semester (———)

30. **Private Corporations.**—Nature of a corporation and its relation to its stockholders; creation of a corporation; de facto corporations; stock subscriptions; promoters; interpretation of charters; implied powers; formalities of corporate contracts; dividends; transfer of stock; forfeiture of charters; contracts; powers and duties of directors; rights of stockholders; dividends; transfer of stock; forfeiture of charters; corporate liability for torts, crimes, and contempts; ultra vires transactions; rights and remedies of corporate creditors; preferences by corporations; stockholders' liability; intercorporate relations; purchase by a corporation of its own stock; dissolution of corporations; corporate receiverships; foreign corporations; limits of legislative control. Open to third-year law students. Text-book: Smith's Cases on Private Corporations. 4 units, 2d semester (HUSTON)

31. **Property III.**—Conditional estates; reversions and remainders; vesting of estates; future interests in property other than at common law; powers; the rule against perpetuities. Open to second- and third-year law students. Prerequisite: course 5. Text-book: Gray's Cases on Property, Vols. V and VI [Omitted in 1907-08; to be given in 1908-09.] 3 units, 2d semester (———)

32. **Roman Law.**—A study of the Institutes of Gaius and Justinian and of selected titles from the Digest, Code and Novels. A reading knowledge of Latin and of either German or French will be required. Open to second- and third-year law students. [To be omitted in 1907-08.]
2 units, both semesters (HUBERICH)

33. **Suretyship.**—Kinds of suretyship; Statute of Frauds; surety's defenses due to original defects in his obligation or its subsequent discharge; surety's right to subrogation, indemnity, contribution, or exoneration; creditor's right to surety's securities. Open to second- and third-year students. Text-book: Ames's Cases on Suretyship.
2 units, 1st semester (BINGHAM)

SPECIAL COURSE

34. **International Law.**—See course 19 in History. Text-book: Scott's Cases on International Law.
3 units, both semesters (DUNIWAY)

DRAWING

Arthur Bridgman Clark, Associate Professor.
Chloe Lesley Starks, Florence Lundborg, Instructors.
Maud Houston Lanktree, Assistant.

The Department aims to meet the needs of three classes of students: students who wish training in artistic perception and graphic expression for its general culture value; students who wish to begin professional art study while receiving other university training; and technical students to whom knowledge of representative drawing is essential.

Course 1 or its equivalent must precede all other technical courses (excepting courses 8 and 9). Courses 3, 4, 5, 11, and 12 may receive credit a second time when continued with sufficient skill.

For students making Drawing their major study the following is an average programme: Elementary still life (3 to 5 units); Cast drawing (3 units); Landscape (3 units); Perspective (2 units). Total 13 units the first year.

Design (4 units); Color (4 units); Head drawing or Landscape (5 units); Lectures (2 units). Total 15 units the second year.

Journal Club, Teachers' course, and a continuation of Design, or Landscape, or Head and Illustration, or Color (the particular combination which is best fitted to the purposes of the particular student). Total 20 units during the third and fourth years.

The Teacher's Recommendation

The minimum requirement for the High School recommendation in Drawing is courses 1, 2, 3 or 4, and 5 (3 units each) also 6, 10, and 11. Total 18 units.

1. **Elementary Drawing.**—Introductory course: still life in pencil, charcoal, and wash. Open to all students.
2 to 5 units, either semester (Starks)

2. **Drawing of the Head.**—From the cast.
3 to 5 units, either semester (Lundborg)

3. **Drawing of the Head.**—A continuation of course 2 from life. Open to second-year students.
3 to 5 units, either semester (Lundborg)

4. **Color.**—Still-life painting in oils or water colors. Open to students with six units of drawing.
2 to 5 units, either semester (LUNDBORG)

5. **Landscape.**—Chiefly outdoor work; but supplemented during the colder weather of each semester by study from photographs and from plant forms with special attention to decorative composition and interpretation. The pen, pencil, charcoal or brush are used in accordance with the capacity and needs of each student.
3 units, either semester (CLARK)

6. **Lectures.**—Ideals and processes in pictorial and applied art. Open to all students of the University.
2 units, 1st semester (CLARK)

7. **Journal Club.**—Required of third- and fourth-year students of the Department.
1 unit, 2d semester (CLARK)

8. **Scientific Perspective.**—A series of problems involving the mathematical principles of perspective, and the application of these principles to actual buildings and objects. [Course 8 is given in alternate years; will not be offered in 1907-08.] 2 units, 2d semester (CLARK)

9. **Science Drawing.**—A course designed to assist students in natural history laboratories. It includes the drawing of simple scientific subjects in pen outline, line and stipple shading, wash, and line and wash. Especial attention will be paid to needs of individual students. Open to science students on advice. 2 units, both semesters (STARKS)

10. **Teachers' Course.**—For intending teachers of drawing. Open to advanced students only. Given in alternate years.
2 units, 2d semester (CLARK)

11. **Design.**—Exercises in the principles of abstract design, decorative design, and structural design. Application of the principles to interior household fittings, and the handicrafts generally. 2 to 3 units, both semesters (CLARK)

12. **Illustrating.**—Practice in design and appreciation of the book arts, including title pages, book plates, borders, announcements, head and tail pieces and illustrations. Must be preceded by course 3.
2 to 3 units, both semesters (LUNDBORG)

MATHEMATICS

ROBERT EDGAR ALLARDICE, RUFUS LOT GREEN, Professors.
HANS FREDERIK BLICHFELDT, Associate Professor.

The courses in this department have been arranged to meet the wants of two classes of students—students whose major subject is Mathematics, and students who, while taking their major in some other department, desire to include some Mathematics in their course. Students in Engineering are provided for in the Department of Applied Mathematics.

For students whose major subject is Mathematics the following programme of work is recommended: In the first year, courses 2, 3, and 4; in the second year, courses 9 and 21; in the third year, courses 13, 14, and 18; while the work during the fourth year and for graduate students may be selected from the remaining courses, and from the Department of Applied Mathematics. The advanced courses will, for the most part, be given once in two or once in three years, and it is hoped that the advanced students will thus have the opportunity of studying the more important branches of modern mathematics.

Students whose major subject is Mathematics are recommended to begin the study of either French or of German in their freshman year.

Students who desire to take one or more years of Mathematics as a part of a liberal training are recommended to begin their work in this Department with one or more of the courses 1, 2, 3.

The Teacher's Recommendation

For the High School recommendation in Mathematics the the following courses are required: 1, 2, 3, 4, and 9.

1. **Trigonometry.**—Elementary course, with applications involving logarithmic calculation.
2 units, 1st semester (BLICHFELDT)

2. **Solid Geometry.**—Elementary course.
2 units, 2d semester (BLICHFELDT)

3. **Algebra.**—Fundamental laws, degree, symmetry, indeterminate coefficients, remainder theorems, factors, complex numbers, introduction to theory of equations, progressions,

permutations, and combinations. Presupposes entrance credit in Elementary Algebra.
5 units, 1st semester (GREEN)

4. **Co-ordinate Geometry.**—An elementary course in the analytic geometry of the conic sections, including the discussion of the general equation of the second degree. Presupposes course 3. 5 units, 2d semester (GREEN)

[Students making Mathematics their major subject should take courses 3 and 4 as the first year's work, and those who have not had Trigonometry should also take course 1.]

5. **Determinants.**—Elementary course. Presupposes course 3. [Not given in 1906-07.]
2 units, 1st semester (BLICHFELDT)

6. **Non-Euclidean Geometry.**—Presupposes a course in Calculus. 2 units, 2d semester (BLICHFELDT)

7. **General Course.**—An elementary course, including topics in algebra, trigonometry, co-ordinate geometry, and calculus.
3 units, both semesters (BLICHFELDT)

9. **Differential and Integral Calculus.**—Lectures on the Differential and Integral Calculus, with applications to the theory of plane curves, on the lines of Williamson's treatises.
3 units, both semesters (ALLARDICE)

10. **Co-ordinate Geometry.**—An elementary course in the analytic geometry of the conic sections, including the discussion of the general equation of the second degree. Presupposes course 3. 3 units, both semesters (MILLER)

11. **Advanced Calculus.**—A continuation of course 9.
2 units, 1st semester (ALLARDICE)

12. **Theory of Functions.**—Elementary course.
2 units, 2d semester (ALLARDICE)

15. **Differential Equations.**
3 units, both semesters (BLICHFELDT)

16. **Definite Integrals.**—[Not given in 1906-07.]
2 units, 2d semester (ALLARDICE)

17. **Theory of Curves.**
2 units, 1st semester (ALLARDICE)

18. **Modern Analytic Geometry.**—Homogenous co-ordinates, including line co-ordinates, projective properties of conics,

systems of conics. Introduction to general theory of curves. Presupposes course 10. 2 units, both semesters (GREEN)

20. Vector Analysis.
3 units, both semesters (MANNING)

21. Projective Geometry.
2 units, both semesters (ALLARDICE)

22. Theory of Linear Groups.
2 units, 1st semester (BLICHFELDT)

23. Differential Geometry.
2 units, 2d semester (ALLARDICE)

APPLIED MATHEMATICS

LEANDER MILLER HOSKINS, Professor.

HALCOTT CADWALADER MORENO, SIDNEY DEAN TOWNLEY,* WILLIAM ALBERT MANNING, Assistant Professors.

WILLIAM ORVILLE MENDENHALL, Instructor.

ROSS DUDLEY BRACKETT, CYRIL FRANK ELWELL, GEORGE WILLIAM McDANIEL, CHARLES HUGH PAXTON, EDWARD GWYN SHEIBLEY, DONALD STEEL, HALBERT RAY THOMAS, Student Assistants.

Under Applied Mathematics are included the courses in mathematics which are required of students in Engineering. The aim is to make these courses practical in the sense of furnishing thorough drill on fundamental principles and much practice in their application. Emphasis is laid upon accuracy and system in the solution of numerical problems. Students whose training in arithmetical work has been deficient, or who are otherwise inadequately prepared, or who lack aptitude for mathematical study, cannot pursue these courses successfully.

Course 1 embraces the regular first-year work, and courses 2 and 3 the regular second-year work. Until August, 1908, course B is also a required part of the first year's work, as is also course A for students lacking entrance credit in Solid Geometry.

Beginning with the year 1908-09, courses A and B will be made the equivalents of the corresponding entrance subjects

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* Beginning August, 1907

(5 and 6), and will be prerequisites to the regular first-year work, so that students entering the University without entrance credit in these subjects will not be able to complete the requirements for graduation in engineering in four years.*

A. Solid Geometry.—This presupposes Plane Geometry, and is not required of those having entrance credit in Solid Geometry (subject 5).

2 units, 1st semester (MANNING)

B. Trigonometry.—Plane and Solid Geometry are prerequisites. Until August, 1908, this course will be a part of the first-year work of all students of engineering, entrance subject 6 not being accepted as its equivalent unless supplemented by a special examination.† Students not having entrance credit in Trigonometry should take this course the first semester.

Beginning with 1908-09, this course will be made the equivalent of entrance subject 6, and will not be open to students having entrance credit in this subject. Courses A and B (or the corresponding entrance subjects) will thereafter be prerequisites to the regular first-year work.

3 units, either semester (MORENO, MANNING, MENDENHALL)

1. First-Year Mathematics.—During 1907-08 this will embrace Algebra and Coordinate Geometry, being equivalent to the courses formerly numbered 1 and 4. The course will begin with a rapid review of elementary Algebra, students showing deficient preparation not being permitted to continue. This course is open to students who have entrance credit in Elementary Algebra (subject 3*a*), but entrance credit in Advanced Algebra (subject 3*b*, *c*) is not accepted as equivalent to any part of the course, unless supplemented by a special examination.‡

Beginning with 1908-09, this course will include (*a*) Algebra, (*b*) Trigonometry, and (*c*) Coordinate Geometry, and will be open only to students who have entrance credit in Solid Geometry and Trigonometry, or who have completed courses A and B. 5 units, both semesters (MORENO, MANNING, MENDENHALL)

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*It is not intended to offer these preparatory courses permanently, but a year's notice will be given of their withdrawal.

†This examination will be held at 9 a.m., August 28, 1907.

‡This examination will be held at 2 p.m., August 28, 1907, and January 7 1908.

2. **Calculus.**—An elementary course on Differential and Integral Calculus, in which emphasis is laid on fundamental principles and simple applications. (Formerly numbered 5). 3 units, both semesters (MORENO, MANNING, MENDENHALL)

3. **Theoretical Mechanics.**—An elementary course, covering the fundamental principles of Statics, Kinematics, and Kinetics, restricted mainly to coplanar forces and to plane motion of particles and of rigid bodies. An elementary treatment of Graphic Statics is included. The course is designed as a preparation for the courses in Applied Mechanics taken by students of Engineering, but is open to all whose preparation includes the equivalent of course 1. Calculus must either precede this course or be taken at the same time. (This course was formerly numbered 6.)
5 units, both semesters (HOSKINS)

In addition to the foregoing, which are required of all students of engineering, the following elective courses are offered.

4. **Adjustment of Observations.**—Theory of the method of least squares, with applications. Credit in course 2 or its equivalent is a prerequisite.
2 units, 2d semester (MORENO)

5. **General Astronomy.**—General survey of the various branches of astronomy, including study of the celestial sphere, the bodies of the solar system, the fixed stars, comets, and other heavenly bodies. The treatment will be essentially non-mathematical, but a knowledge of trigonometry and general physics is desirable and a knowledge of co-ordinate geometry will be found helpful. Not recommended for first-year students. To be taught by lectures and text-book, models, and lantern slides.
3 units, 1st semester (TOWNLEY)

6. **Graduate Courses.**—Advanced courses in Theoretical Mechanics, Hydro-mechanics, Theory of the Potential Function, or Theory of Elasticity, may be arranged for students having the requisite mathematical training.

PHYSICS

FERNANDO SANFORD, Professor.
HERMAN DE CLERCQ STEARNS,* Associate Professor.
FREDERICK JOHN ROGERS, ELMER REGINALD DREW, JOSEPH GRANT BROWN, Assistant Professors.
SHIRLEY HYATT, WENDELL PRESCOTT ROOP, PERLEY ANSON ROSS, GEORGE ARMSTRONG TARBELL, Assistants.

1. **Dynamics.**—Including hydrostatics and pneumatics. Open only to students who have had Algebra and Plane Geometry. Required as a preparation for each of the courses following (except 6 and 7). One lecture and two or three laboratory periods per week. Students who have not taken a preparatory course in Physics are expected to register for four units. 3 or 4 units, either semester (BROWN)

2. **Electricity and Magnetism.**—One lecture and two or three laboratory periods per week. Prerequisite: course 1, or its equivalent. 3 or 4 units, 2d semester (DREW)

3. **Heat.**—One lecture and two laboratory periods per week. Prerequisite: course 1. 3 units, 2d semester (SANFORD)

4. **Sound.**—Including wave-motion. Two laboratory periods per week. Prerequisite: course 1.
2 units, 1st semester (BROWN)

5. **Elementary Optics.**—Three laboratory periods per week. Prerequisites: course 1, and Trigonometry.
3 units, either semester (SANFORD)

[Courses 1, 2, 3, 4, and 5 constitute a course in General Physics, and are intended to precede the advanced courses.]

6. **Engineering Physics.**—Intended especially for students in Mechanical and Electrical Engineering. Three experimental lectures and recitations and one laboratory period per week. Prerequisite: Entrance Physics, and course 3 in Applied Mathematics, or may be taken concurrently with Theoretical Mathematics.

a. Heat, Light, and Sound.
4 units, 1st semester (DREW)

b. Electricity and Magnetism.
4 units, 2d semester (ROGERS)

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*Absent on leave.

7. **Electricity and Magnetism.**—An introductory course. Two lectures and two laboratory periods per week. Prerequisite: Entrance Physics.
4 units, 1st semester (ROGERS)

8. **Advanced Optics.**—Two laboratory periods per week. Prerequisite: course 5. 2 units, 2d semester (SANFORD)

9. **Electrical Measurements.**—Open to students who have taken course 2 or course 7.
4 units, either or both semesters (ROGERS)

10. **Analytic Mechanics.**—Lectures. Prerequisites: course 1 and the Differential and Integral Calculus.
4 units, 2d semester (DREW)

11. **General Physics.**—Lectures. Prerequisites: courses 1, 2, 3, 4, and 5, or their equivalent.
4 units, both semesters (SANFORD)

12. **Electrical Theory.**—Prerequisites: course 2, or *6b*, or 7, and Calculus. 3 units, 1st semester (DREW)

13. **Teachers' Course in Elementary Physics.**—Prerequisites: courses 1, 2, 3, 4, and 5, or their equivalent.
1 unit, both semesters (SANFORD)

14. **General Thermodynamics.**—Prerequisites: Calculus and course 3, or its equivalent.
3 units, 1st semester (STEARNS)

15. **Vibratory Motion.**—Recitations and lectures illustrated by occasional lecture experiments and a few carefully executed laboratory experiments. A knowledge of Differential and Integral Calculus is required.
3 units, 1st semester (ROGERS)

16. **The Kinetic Theory of Gases.**—Prerequisites: Calculus, and course 3 or its equivalent.
2 units, 2d semester (ROGERS)

17. **History of Physics.**—Lectures and readings on the history of physical science with special reference to the development of theories. Prerequisites: courses 1, 2, 3, 4, and 5.
2 units, 2d semester (ROGERS)

18. **Investigation of Original Problems in the Laboratory**—Hours to be determined in each case. (SANFORD)

The Teacher's Recommendation

The minimum requirement is courses 1, 2, 3, 4, 5, or an equivalent, and course 13.

Laboratory Fees

Courses 1, 2, 3. 5, 7, and 8, $4 each, per semester; courses 4, *6a*, and *6b*, $3 each, per semester; course 9, $5 per semester; course 18, $2 per unit per semester.

CHEMISTRY

John Maxson Stillman, Lionel Remond Lenox, Edward Curtis Franklin, Stewart Woodford Young,* Professors.

Robert Eckles Swain, Associate Professor.

Alvin Joseph Cox,* John Pearce Mitchell, William Henry Sloan, Instructors.

William Edmund Burke, Acting Instructor.

William George Bateman, Jacob Meday Price, Dane Manson Greer,† Berton Woodford Crandall,† Dennis Robert Hoagland, Hugh Leslie Thomson,† Edward Waldo Rice,‡ Hazel Wood Severy,‡ Lovell Langstroth, John Franklin Ellis, Hananiah Hugh Ross,‡ Assistants.

I. Lecture Courses

1. **General Inorganic Chemistry.**—Comprising a systematic treatment of elementary principles and the properties of the more important elements and their compounds. In connection with laboratory course *a*, and open in connection with that course, to all students in the University.

2 units, both semesters (Swain)

2. **Principles of General and Inorganic Chemistry.**—Discussion of the elements of chemical theories and of important generalizations in the field of inorganic chemistry. Open to all students who have completed courses 1 and *a*.

3 units, both semesters (Stillman)

3. **Organic Chemistry.**—Lectures and reviews on the chem-

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*Absent on leave, 1906-07.

†First semester.

‡Second semester.

istry of carbon compounds. Open to students who have completed courses 1 and *a*.
2 units, both semesters (FRANKLIN)

4. **Industrial Chemistry.**—Lectures on fuels, water, acid and alkali manufacturing, explosives, sugar-making and refining, petroleum. Lectures in this course are also given by Professor FRANKLIN (Dyes). Open to students who have completed courses 2 and 3; or may be taken concurrently with course 3. 2 units, both semesters (STILLMAN)

5. **History of Chemistry.**—Open to students who have completed courses 2 and 3. [Not given in 1906-07.]
2 units, 1st semesters, in alternate years (STILLMAN)

6. **Qualitative Analysis.**—In connection with laboratory course *b*. 1 unit, either semester (LENOX)

7. **Advanced Organic Chemistry.**—Advanced topics in organic chemistry, including stereo-chemistry. Open to students who have completed course 3. [Given in 1906-07.]
2 units, both semesters, in alternate years (FRANKLIN)

8. **General Physical Chemistry.**—Lectures covering as far as possible the whole field of physical chemistry. Open to students who have completed courses 2 and *d* in Chemistry, courses 4 and 9 in Mathematics, and course 1 in Physics (course 2 being also recommended.)
3 units, both semesters (FRANKLIN)

9. **Physical-Chemical Measurements.**—An informal course of lectures given as needed in connection with course *f*.
No credit (BURKE)

10. **Theories of Analytical Chemistry.**
1 unit, 2d semester (STILLMAN)

11. **Physiological Chemistry.**—A brief survey of the field of physiological chemistry. Open to students who have completed courses 3 and *d*, and Physiology 1.
2 units, both semesters (SWAIN)

12. **Seminary in Chemistry.**—Discussion of assigned topics in theoretical and general chemistry. Open to graduate students, and to advanced undergraduates in Chemistry, with the approval of the Faculty in Chemistry.
1 unit, both semesters

II. LABORATORY COURSES

a. **General Inorganic Chemistry.**—First semester: Illustrating fundamental laws and principles of elementary chemistry. Second semester: Inorganic preparations and general chemistry. Students with entrance credit in chemistry may be excused from the first semester's laboratory work. In connection with course 1. 2 afternoons, both semesters (SWAIN, MITCHELL, PRICE, GREER, LANGSTROTH, ELLIS, ROSS)

b. **Qualitative Analysis.**—Open to students who have completed courses 1 and *a*.
3 afternoons, either semesters (LENOX, BATEMAN)

c. **Preparation of Typical Carbon Compounds.**—Open in connection with course 3 to students who have completed course *b*. Either one or two semesters, one semester required for graduation of Chemistry majors.
3 afternoons, either or both semesters (FRANKLIN)

d. **Quantitative Analysis.**—Training in manipulation in gravimetric and volumetric methods. Work begins either semester. Students in other departments than Chemistry may register for three afternoons if they cannot arrange for four, as is recommended. Open to students who have completed courses 6 and *b*.
4 afternoons, either semester (STILLMAN, SLOAN)

e. **Mineral Analysis.**—Systematic analysis of representative minerals. Open to students who have completed course *d*, and required of students whose major subject is Chemistry, unless *f* or *h* be elected instead.
4 afternoons, either semester (STILLMAN, LENOX, SLOAN)

f. **Physical-Chemical Measurements.**—Exercises in the practice of physical-chemical laboratory methods. Open to students who have completed or are taking course 8, and who have completed course *d*.
3 or 5 units, either semester (BURKE)

g. **Physical-Chemical Research.**—Special problems for original investigations in the field of Physical Chemistry. Open to students who have completed course *f*. [Not given in 1906-07.] To be arranged (YOUNG)

h. **Physiological Chemistry.**—A laboratory course embracing a study of the various tissues and fluids of the body and of the chemistry of digestion and excretion. Requirements as under lecture course 11.

3 units, both semesters (SWAIN)

i. **Urine Analysis.**—Open to students who have completed course *d*. 3 afternoons, 2d semester (SWAIN)

j. **Special Methods in Mineral Analysis.**—Chiefly volumetric, including iron and steel analysis. Open to students who have completed course *d*.

4 afternoons, 2d semester (LENOX)

k. **Organic Chemistry Research.**

To be arranged (FRANKLIN)

l. **Sugar Analysis.**—Methods of analysis used in sugar manufacture and refining. Open to students who have completed courses *d* and *c*.

3 or 4 afternoons, 1st semester (STILLMAN)

m. **Organic Analysis.**—Open to students who have completed courses *d* and *e*.

2 afternoons, either semester (FRANKLIN)

n. **Assaying.**—Open to students who have completed course *d*. 3 afternoons, either semester (LENOX)

o. **Sanitary Water Analysis.**—Open to students who have completed course *d*.

3 afternoons, 2d semester (STILLMAN)

Candidates for the degree of Bachelor of Arts in Chemistry may select any one of the four following courses (A, B, C, D), the requirements of the Department being as follows:

A. GENERAL CHEMISTRY

FIRST YEAR:—Chemistry 1, *a*; Physics 1; Mathematics 3; German 1.

SECOND YEAR:—Chemistry 2, 6, *b*; Mathematics 9; German *2a*.

THIRD and FOURTH YEARS:—Chemistry *d*, 3, *c*, 8, *f*.

Course A is recommended for all who are studying the science of chemistry for its own sake or for the profession of teaching.

B. ANALYTICAL CHEMISTRY

FIRST YEAR:—Chemistry 1, *a*; Physics 1; German 1.

SECOND YEAR:—Chemistry 2, 6, *b*; Geology 1, 2; German *2a*.

THIRD and FOURTH YEARS:—Chemistry *d*, *e*, *c*, *n*, 3, 10; Geology 5.

Course B is particularly adapted to students who are looking forward to the career of analytical chemist and assayer.

C. MEDICAL OR SANITARY CHEMISTRY

FIRST YEAR:—Chemistry 1, *a*; Physiology 1; German 1.

SECOND YEAR:—Chemistry 2, 6, *b*; Physics 1; German 2*a*.

THIRD and FOURTH YEARS:—Chemistry 3, *c*, *d*, 11, *h*.

Course C is particularly adapted to students who are looking forward to medical education.

D. CHEMICAL ENGINEERING

This course comprises four years of the necessary five years' work leading to the advanced degree of *Engineer* in Chemical Engineering. Candidates in this course receive the degree of A. B. in Chemistry upon completion of the following requirements:

FIRST YEAR:—Chemistry 1, *a*; Applied Mathematics A, B, 1; German 1.

SECOND YEAR:—Chemistry 2, 6, *b*, *d*; Applied Mathematics 2, 3.

THIRD YEAR:—Chemistry 3, *c*; Engineering 1*a*, 1*b*, 2; Physics 1, 2 (or 6, 7); German 2*a*.

FOURTH YEAR:—Chemistry 4, *e* (or *n*); Mechanical Engineering 2, 3*a*, 3*c*; Geology 11*c*; Engineering 3*a*.

Course D is intended particularly for students who are working toward the degree of Chemical Engineer and who desire to fit themselves for positions of responsibility in connection with the administration of industries involving chemical knowledge and skill.

ADVANCED DEGREES

Applicants for the degree of *Master of Arts* in Chemistry will be expected to complete, in addition to the requirements for the bachelor's degree, the equivalent of thirty units' work in the University—of which approximately two-thirds must be in the Department. This work will include a thesis based on laboratory work, and chemistry 8 and *f*, if not included in the undergraduate work.

Candidates for the advanced degree of *Engineer* in Chemical Engineering will be required to complete, in addition to the requirements for the A. B. degree specified under course D: Mechanical Engineering 4, 6 (first semester of the course), 9, 8 (2 afternoons per week for one semester), Chemistry 8, and a thesis based on laboratory work. Electrical Engineering 1 is advised if possible, though not required. It is estimated that these requirements may be completed in one year after the completion of the requirements under Course D.

Candidates for the degree of *Doctor of Philosophy* in Chemistry, after the completion of the equivalent of the requirements for Master of Arts or Engineer, will follow such courses as are approved by the Department faculty, subject to general University regulations.

The Teacher's Recommendation

The minimum requirement for the high school teacher's recommendation in Chemistry is courses 1 and *a* (Elementary and General Inorganic, lectures and laboratory), the first half of course 2 (Principles of Chemistry), and either he second half of course 2, or courses 6 and *b* (Qualitative Analysis, lectures and laboratory).

Laboratory Fees

A charge of twenty-five dollars per semester will be made to students in each laboratory course of not more than four units registration. Of this charge five dollars per semester in assaying, and ten dollars per semester in the other courses, is returnable, less bills for breakage and loss of apparatus.

BOTANY

Douglas Houghton Campbell, Professor.
George James Peirce, Associate Professor.
Anstruther Abercrombie Lawson,* Assistant Professor.
Harry Baker Humphrey, Acting Instructor.
Richard Morris Holman, Assistant.

1. **Elementary Botany.**—Study of representatives of the principal groups of plants, with lectures upon special morphology and classification. (Campbell's University Textbook of Botany.)

3 units, both semesters (Campbell, Peirce, Humphrey)

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*Absent on leave, 1906-07.

2. **Algae.**—Lectures, reading, and laboratory work upon the special morphology and classification of the Algae.
5 units, 1st semester (CAMPBELL)

3. **Archegoniatae.**—Special morphology and classification of the Archegoniatae. Continuation of course 2.
5 units, 2d semester (CAMPBELL)

4. **Archegoniatae.**—Advanced work in special groups.
1st and 2d semesters (CAMPBELL)

5. **Physiology.**—Laboratory work, lectures, and reading on Respiration and Nutrition. (An elementary knowledge of Physics and Chemistry is a desirable preliminary to this course.) 3 units, 1st semester (PEIRCE)

6. **Elementary Bacteriology.**—Laboratory work, lectures, and reading. 3 units, 2d semester (PEIRCE)

7. **The General Physiology of Plants.**—Lectures. Open to all. 1 unit, 1st semester (PEIRCE)

8. **The Evolution of Plant Forms.**—Lectures. Open to all except first-year students. [Not to be given in 1907-08.]
1 unit, 2d semester (CAMPBELL)

9. **Physiology.**—Laboratory work, lectures, and reading on Growth, Irritability, and Reproduction. (An elementary knowledge of Physics and Chemistry is a desirable preliminary to this course.) 3 units, 2d semester (PEIRCE)

10. **Histology.**—Lectures and laboratory work on the structure and development of the sporophyte tissues. Microtechnique. 3 units, 1st semester (LAWSON)

11. **Cytology.**—Lectures and laboratory work on the cell and cell organs. Alternating with course 12.
3 units, 2d semester (LAWSON)

12. **Special Morphology of the Gymnosperms.**—Given in alternate years. 3 units, 2d semester (LAWSON)

13. **Advanced Work in Morphology and Physiology.**—Intended especially for graduate students.
(CAMPBELL, PEIRCE)

Course 1 must precede all other courses, except courses 7 and 8. Students making the subject a major must complete thirty-five units, including courses 1 to 3 and course 5, course 2 or course 3 in Systematic Botany, and also course 1 in Zoology, before graduation. Course 13 is intended especially for graduate students, and opportunities will be given such students for carrying on special lines of work upon original problems.

The Teacher's Recommendation

The minimum requirement is course 1 and two additional courses.

Laboratory Fees

Two dollars and a half for course 1; ten dollars for course 6; five dollars for courses 5 and 9; three dollars per semester for each of the other laboratory courses.

SYSTEMATIC BOTANY

WILLIAM RUSSELL DUDLEY,* Professor.
LEROY ABRAMS, Assistant Professor.
JAMES IRA WILSON MCMURPHY, OLIVE AGATHA HUMPHREY, Assistants.

Instruction in this Department chiefly relates to the Spermaphytes, their structure, affinities, and geographic distribution. The advanced work on the Fungi will also be given under its direction. Course 1, or its equivalent, and the Algæ and Archegoniatæ in General Botany, course 1 in Zoology, and course 1 in Entomology are required of students intending to graduate with Systematic Botany as a major study. Course 1, or its equivalent, is also required as a basis for courses 2, 4, and 6. An elementary knowledge of the structure of the flowering plants only is required to enter courses 3 and 5. Students are strongly advised to take Physiological Anatomy, and one course in Physiology by Professor PEIRCE.

[1. **Elementary Botany.**—A study of plant types, etc. This is course 1 under Botany.]

2. **Fungi.**—The laboratory work (three hours) will be devoted to morphology, development, and culture methods; the lectures to systematic relationships, with an account of economically important forms.

5 units, 1st semester (DUDLEY, ABRAMS, MCMURPHY)

3. **Spermaphyta.**—The morphology, histology, and affinities

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*Absent on leave, 1906–07.

of the principal orders of flowering plants represented on the Pacific Slope will be studied, and an acquaintance made with typical forms through dissection and drawing.

4 units, 2d semester (DUDLEY, ABRAMS, MCMURPHY)

[4. **The Algae and Archegoniatae.**—Courses 2 and 3 under Botany.]

5. **Geographical Distribution and Forest Botany.**—Lectures on the orders containing trees and shrubs and on the general principles of geographical distribution which they illustrate. Laboratory work, also preparation of herbarium specimens of woody plants, native and exotic.

3 units, 2d semester (DUDLEY, ABRAMS, MCMURPHY)

6. **The Compositae.**—A study of representatives of the tribes of Compositæ, with reference to the general principles of classification.

2 or more units, 1st semester (DUDLEY, ABRAMS, MCMURPHY)

7. **Advanced Work.**—Advanced or special study, chiefly for seniors in the Department. It is planned to meet the needs of each individual, and to promote habits of independent work. 3 or more units, each semester (DUDLEY, ABRAMS)

8. **Graduate Work.**—This includes investigation on a special subject in the Spermaphyta or Fungi, which may be either a systematic or a biological study. It is supplemented by reading, and a study of methods in bibliography.

(DUDLEY, ABRAMS)

Several carefully planned excursions in the second semester, through the plant formations in the adjacent mountains, are made the subjects of written reports by the students in course 5. Similar excursions are required in Course 2.

The Herbarium consists largely of plants collected in Western America, and includes, besides purchases, considerable donations from the National Herbarium, the California Academy of Sciences, J. W. Congdon of Mariposa, and others. Gifts of herbarium specimens of trees and shrubs are especially desired, and will be named for collectors. The considerable private collections of flowering plants and fungi belonging to the head of the Department are in constant use.

Laboratory Fees

Laboratory fees for courses 5 and 6, two dollars; for the other courses, three dollars.

PHYSIOLOGY AND HISTOLOGY

Oliver Peebles Jenkins, Professor.
Frank Mace McFarland, Associate Professor.
James Rollin Slonaker, Clara S. Stoltenberg, Assistant Professors.
John Francis Cowan,* Acting Instructor.
Hubert Oliver Jenkins, Dexter Newell Richards, Assistants.

Undergraduate Courses

1. **General Anatomy and Physiology.**—This course is designed to give a general view of the laws of the structure and the activity of organisms. The work will give occasion to discuss many questions of General Biology. It consists of: First, the study of the cell and its activities as shown in the unicellular organisms, in reproductive cells, and in individual cells of many tissues; second, the study of the laws and course of development resulting in higher differentiations in structure, and specializations in function, exhibited in a selected series of organisms, both animals and plants, of increasing complexity; third, the comparative study of the physiological processes of forms placed under widely different conditions. The latter part of the course is occupied with an introduction to the embryology, anatomy, and physiology of vertebrates. (One lecture and five laboratory hours a week.)
3 units, both semesters
(Jenkins, Slonaker, H. O. Jenkins)

2. **Physiology of Muscle, Blood, and Circulation.**—To be preceded by course 1. An experimental course covering the ground represented in Foster's Physiology, Part I, or Howell's Text-book on the same subjects. (One lecture and five laboratory hours per week.) 3 units, 1st semester
(Slonaker, Richards)

3. **Physiology of Digestion, Respiration, Elimination of Wastes, Metabolism, and Nutrition.**—Planned to follow course 2. An experimental course, with Foster's Physiology, Part II, and Howell's Text-Book, as texts. (One lecture and five laboratory hours per week.)
3 units, 2d semester (Slonaker, Richards)

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* Absent on leave.

4. **Structure of the Nervous System.**—The course consists of the dissection and comparative study of a series of vertebrate brains, including the human brain and cord, also the peripheral nervous system; abundant material is provided, also such necessary helps as the latest models and charts. For texts the student will use Quain, Edinger, and Barker. (One lecture and five laboratory hours per week.)

3 units, 1st semester (STOLTENBERG)

4b. **Structure of the Nervous System.**—Advanced course. Open to those who have taken courses 4 and 5.

2 units, 2d semester (STOLTENBERG)

5. **Histology of the Nervous System and Sense Organs.**—The course includes also the anatomy of the sense organs. It is planned to accompany course 4, the two being designed to give the gross and minute anatomy of the central and peripheral nervous systems and sense organs. The texts necessary for the student's use are Quain and Barker. (One lecture and five laboratory hours per week.)

3 units, 1st semester (STOLTENBERG)

6. **Physiology of the Nervous System and Sense Organs.**—An experimental course in these subjects, designed to follow courses 4 and 5. Texts: Foster, Howell's Text Book. (One lecture and five laboratory hours per week.)

3 units, 2d semester (JENKINS)

7. **The Vertebrate Eye.**—A comparative study of the structure and physiology of the eyes of vertebrates, giving special attention to the retina. Open to advanced students. (Lecture and laboratory work, six hours per week.)

2 units, 2d semester (SLONAKER)

8. **Special Courses in Physiology.**—Advanced courses open only to those who have had courses 1, 2, 3, 4, 5, and 6. They are arranged for the advanced study of selected subjects in physiology, or as a drill in the methods of research. The work will be planned for the individual student, the time varying with the exigencies of the case.

2 to 5 units, both semesters (JENKINS)

9. **Histology.**—The study of the structure of the cell and its general phenomena, the fundamental tissues and the outline of their development in a comparative way, occupy the first semester. In the second, the microscopic anatomy of

organs, except those of the nervous system and special senses [see courses 4 and 5], is dealt with. Elementary histological technique is taught during the course. Prerequisite: course 1, or its equivalent. Physiology majors are advised to take courses 2, 3, and 9 together. (One lecture and six laboratory hours per week.) 3 units, both semesters (McFarland)

10. **Histogenesis.**—A course in advanced Histology for students who have completed courses 1 and 9, and in addition the first semester of Vertebrate Embryology (Zoology 7). It comprises the comparative study of the histogenesis of the fundamental vertebrate tissues and organs. (One lecture per week, minimum laboratory work six hours per week.)
3 units, 1st semester (McFarland)

11. **Neurocytology.**—A comparative study of the minute structure of the nerve cell and nerve fibre, the neurone theory, and the question of functional alterations of structure during normal activity and artificial stimulation. (One lecture and at least six laboratory hours per week.) Open to advanced students. [Not given in 1906-07.]
3 to 5 units, 2d semester, in alternate years (McFarland)

12. **Cellular Biology.**—A course in Cytology dealing with the structure and functions of the cell, with special reference to the reproductive processes in unicellular and multicellular organisms, and the theories connected therewith. Open to advanced students. (Two lectures per week, with demonstrations and laboratory work.) [Not to be given in 1907-08.]
3 to 5 units, 2d semester, in alternate years (McFarland)

13. **Anatomy.**—This course consists of twelve weeks' study of human osteology, with a brief comparative study of skeletons of vertebrates. The remaining six weeks is given to mammalian myology, angiology, and splanchnology (dog, cat, rabbit). [For anatomy of nervous system and sense organs, see courses 4 and 5.]
2 to 5 units, 2d semester (Stoltenberg)

14. **Special Courses in Histology.**—Advanced courses in Histology and Microscopic Anatomy will be arranged for individual students, with a view to giving drill in methods of research. Open only to those who have had courses 1, 5, and 9. 2 to 5 units, both semesters (McFarland)

15. **Journal Club.**—Students in the advanced classes will be

expected to meet once a week to discuss current literature in Physiology and Histology. 1 unit, both semesters

16. **Seminary in Physiology and Histology.**—Open to graduate students. **2 units, both semesters**

17. **Research in Physiology or Histology.**
To be determined, both semesters
(JENKINS, MCFARLAND, SLONAKER, STOLTENBERG)

Candidates for the Bachelor's degree who select Physiology and Histology as a major will be expected to take courses 1, 2, 3, 4, 5, 6, 9, and 15, and at least five units to be made up from the other courses offered; and in addition courses 1 and a in Chemistry, 1 and 2 in Physics, and the first semester in Embryology (course 7 in Zoology).

Laboratory unit of credit.—In those courses in which definite laboratory time is not fixed, three hours of laboratory work per week through one semester are taken as the equivalent of one unit of credit.

The Teacher's Recommendation

Students who wish the Department recommendation for High School teaching in Physiology are expected to complete the first two years' work (courses 1, 2, 3, and 9).

Laboratory Fees

Seven dollars per semester, except for course 1, in which the fee is five dollars per semester.

GRADUATE COURSES

The graduate work of the Department is included in the courses numbered 4*b*, 7, 8, 10, 11, 12, 14, 15, 16, and 17. Undergraduate students may elect such of these courses as they are prepared to take, but credit recorded in undergraduate standing will not count toward a higher degree. The details of the work of a graduate student will be planned for each individual, and will naturally depend on the aim sought by him and upon his previous training. Candidates for the higher degrees will be expected to include in their work attendance on the Journal Club and Seminary, the selection of certain of the courses given above, and the accomplishment of some research. When it is desired to select a minor subject, the choice of such minor will be guided by the needs of the candidate. The work leading to these degrees is of such a nature as to require a reading knowledge of German and French for its accomplishment.

PREPARATION FOR THE STUDY OF MEDICINE

Students intending to enter on the study of Medicine are advised to take Physiology and Histology as a major subject, with Chemistry, Physics, Comparative Anatomy of the Vertebrates, and Hygiene among the collateral subjects. Such a course gives that foundation both in scientific knowledge and in skill in experimental Physiology, and in Histological and Anatomical technique, which will make it possible to accomplish the medical course of the best medical schools with greater advantage.

HYGIENE

WILLIAM FREEMAN SNOW, Associate Professor.
HALBERT WILLIAM CHAPPEL,* ROYCE REED LONG, Instructors.
FLORENCE BOLTON, VERA TOWNSEND, Assistants.

LECTURES

1. **Elementary Hygiene.**—Lectures on the care of the body and conditions conducive to student health. One lecture each week through the year in connection with Gymnasium courses *a* and *e*. 1 unit, both semesters (SNOW)

2a. Infectious Diseases.—The characteristics, modes of conveyance, and modes of infection of certain type diseases, especially those caused by bacteria and protozoa, are made the basis for a general conception of the hygiene of transmissible diseases. Students who have had course 1 in Physiology, or its equivalent, may register for one laboratory demonstration period. Not open to first-year students.
2 or 3 units, 1st semester (SNOW)

2b. Public Health.—Lectures on the principles of public sanitation and the use of disinfectants. Prerequisite: course *2a*. One laboratory demonstration period may be registered for by students who have had Physiology 1 or its equivalent.
2 or 3 units, 2d semester (SNOW)

3. History of Medicine.—Lectures on the more important men and events influencing the development of preventive medicine and Sanitary Science. Not open to first-year students. [Not given in 1906-07.]

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*Absent on leave, 1906-07.

2 units, 1st semester, in alternate years (SNOW)

4. **Sanitary Legislation.**—Lectures on special legislation in the United States on subjects of Public and Industrial Hygiene and Quarantine law. Not open to first-year students.

2 units, 2d semester, in alternate years (SNOW)

LABORATORY COURSES

5a. **Topographical Anatomy.**—Prerequisites: courses 1, 2, 3, 4, 9, and 13 in Physiology. [Not given in 1906-07.]

1 to 3 units, either semester

5b. **Physical Examinations.**—Prerequisites: course 5*a* in Hygiene and courses 5 and 6 in Physiology. [Not given in 1906-07.] 1 to 3 units, either semester

6a. **Hygienic Laboratory Technique.**—Training in the methods employed in Public Health laboratories. Prerequisites: courses 3, 4, and 9 in Physiology, and courses 2*a* and 2*b* in Hygiene. 3 units, 1st semester (SNOW)

6b. **Sanitary Survey.**—Methods of field inspection and examination employed by officers of the Public Health Service. Assigned work will require trips to the federal and municipal Health Departments in the vicinity of San Francisco Harbor, Open to students who have completed course 6*a* in Hygiene.

3 units, 2d semester (SNOW)

7. **Special Prophylactic Measures.**—Discussions and experimental work on the principles of Serum Therapy and on the efficiency of biological products in combating disease. Prerequisite: Hygiene 6*a*.

2 to 4 units, either semester (SNOW)

8. **Research in Hygiene and Physical Education.**—Open to students who have had sufficient preliminary training to enable them to do independent work.

To be arranged (SNOW)

ENCINA GYMNASIUM

a. **Elementary Physical Education.**—Two exercise hours a week in the Gymnasium and its open-air divisions. Planned for the development of strength and endurance, and largely individual, being adapted to the requirements indicated upon physical examination. [This work is part of the requirement for course 1.] (LONG)

b. Advanced Physical Strength.—A continuation of course *a*, with the introduction of exercises in muscular co-ordination and control. Three hours a week. Prerequisite: course *a* or its equivalent. 1 unit, both semesters (LONG)

c. Special Gymnasium Training.—Special work planned for the development of co-ordination and skill on the heavy gymnastic apparatus. Three hours a week. Prerequisite: two semesters of course *b*, or its equivalent.
1 unit, both semesters (LONG)

d. Special Gymnastic Training.—Advanced work with opportunities for training in Gymnasium methods. Three hours a week. Open only to specially qualified students who have completed two semesters of course *c*, or its equivalent.
1 unit, both semesters

ROBLE GYMNASIUM

e. Elementary Physical Education.—Given as a part of the required work for course 1. (BOLTON, TOWNSEND)

f. Prerequisite: course *e*, or its equivalent.
½ unit, both semesters (TOWNSEND)

g.—Prerequisite: course *f*. Various sections will be arranged. ½ unit, both semesters (TOWNSEND)

h.—Prerequisite: two semesters of course *g*.
½ unit, both semesters (BOLTON)

It is advisable for all students to consult the instructors before registering in these courses. New students intending to register for Gymnasium work should present themselves for the required physical examination as early as possible after arriving at the University.

Students are not accepted in the department as candidates for a degree, but a departmental recommendation will be given to students of exceptional ability who have completed courses 1, 2, 5*a*, 5*b*, the gymnasium courses in Hygiene, and courses 1 to 9 inclusive in Physiology. The Physical Training courses are carried on in Encina Gymnasium for men, and in Roble Gymnasium for women. Athletic facilities are offered in connection with each gymnasium.

Laboratory fees

Roble Gymnasium, one dollar per semester; Encina Gymnasium and courses 5 to 8, two dollars each per semester.

ZOOLOGY

Charles Henry Gilbert, Professor.
George Clinton Price, Harold Heath, Associate Professors.
John Otterbein Snyder, Assistant Professor.
Edwin Chapin Starks, Curator.
Walter Kenrick Fisher, Instructor.

1. **Elementary Zoology.**—A laboratory course involving the study of representatives of the principal groups of animals, together with lectures on their structure and classification, and on the general laws of biology which they illustrate.
3 units, both semesters (Price)

2. **The Invertebrates.**—This course, following the first year's work, is designed to give the student a broader knowledge of the morphology and relationships of the more important invertebrate groups.
3 units, both semesters (Heath)

3. **Invertebrate Embryology.**—A study of segmentation, the formation of the germ layers, and certain phases of the later development, including the significance of larval forms and the relationships of the principal phyla. Must be preceded by course 2. 2 units, both semesters (Heath)

4. **Advanced Work on Invertebrates.**—The original investigation of problems connected with the anatomy, embryology, or classification of invertebrates.
2 to 5 units, both semesters (Heath)

4a. **Classification of the Invertebrates.**—A course in the classification of marine invertebrates, with studies in the habits and geographical distribution of species. Must be preceded by course 1.
2 or 3 units, both semesters (Fisher)

5. **The Vertebrates.**—A general course in the classification of vertebrate animals, with studies in the habits and the geographical distribution of species. The course will include field excursions and a study of the methods of collecting and preserving specimens. 2 units, both semesters (Snyder)

6. **Comparative Anatomy of the Vertebrates.**—A more detailed examination of vertebrate morphology, including dissection of representatives of the several classes of vertebrates,

with comparative studies in vertebrate osteology, the nervous and circulatory systems, etc.

3 units, both semesters (SNYDER)

7. **Vertebrate Embryology.**—Development of the chick through the first three days of incubation.

2 units, 1st semester (PRICE)

8. **Vertebrate Embryology.**—A study of the early stages of the development of the various classes of vertebrates, special stress being laid upon the formation of the germ-layers.

2 units, 2d semester (PRICE)

9. **Foetal Anatomy.**—Later development of vertebrates, including such subjects as the metamorphosis of the circulatory and urogenital systems. The work will be devoted largely to the mammals. 2 units, 2d semester (PRICE)

10. **Ichthyology.**—A course of lectures and laboratory work, including an examination of the larger groups of fishes with special reference to the characters on which they are based, and including practical work in the discrimination of species.

2 units, both semesters (GILBERT, STARKS)

11. **Advanced Ichthyology.**—Special problems in the morphology and classification of fishes will be set for advanced students prepared for such work.

2 to 5 units, both semesters (GILBERT)

12. **Journal Club.**—Open to seniors and graduate students.

2 units, both semesters (GILBERT)

Major students must before graduation complete courses 1, 2, 6, 10, 12, the first semester of courses 3 and 7, one advanced course in Zoology, and course 1 in Botany.

Work for graduate and special students will be laid out in accordance with their individual needs and preferences.

The Teacher's Recommendation

The Department recommendation for High School teaching in Zoology requires the completion of the following subjects: Elementary Zoology, 6 units; the Invertebrates, 6 units; the Vertebrates, 4 units; Comparative Anatomy of the Vertebrates, 6 units.

THE ZOOLOGICAL COLLECTIONS

The ZOOLOGICAL MUSEUM contains a very full representation of the fishes of North America, and includes among others a valuable series of the deep-water fishes of the Pacific, and large collections from the West Indies, the Hawaiian Islands, Bering Sea, Japan, the coasts of Mexico and Central America, and the Galapagos Islands. The museum contains also a large representation of the reptiles, batrachians, birds, and mammals of California and adjoining states. The development of the museum has been due very largely to the cooperation of Mr. TIMOTHY HOPKINS.

Material illustrating the principal groups of invertebrates is ample for class instruction.

Laboratory Fees

All laboratory courses, three dollars each per semester.

ENTOMOLOGY AND BIONOMICS

VERNON LYMAN KELLOGG, Professor.
MARY ISABEL McCRACKEN, Instructor.
RENNIE WILBUR DOANE, Instructor and Curator.
DAVID STARR JORDAN, Lecturer.

ENTOMOLOGY

1. **Elementary Entomology.**—The elementary study of insect structure, metamorphosis, and classification, including practice in collecting and preserving specimens.
3 units, 1st semester (McCRACKEN)

2. **Morphology and Physiology of Insects.**—Continuation of the preceding course, devoted to the study of the comparative morphology and special physiology of insects.
3 units, 2d semester (McCRACKEN)

3. **Classification and Development of Insects.**—Continuation of the preceding courses, devoted especially to a rapid study of the present-day classification into orders, families, and genera of the insect class, and to a study of the characteristics of the life history and metamorphosis of insects of all the different orders.
3 units, either semester (McCRACKEN)

4. **Economic Entomology: Coccidae.**—The principles and practice of economic entomology, with special attention to the scale insects (Coccidae). Must be preceded by courses 1 and 2. 2 or 3 units, either semester (DOANE)

5. Economic Entomology: Orchard and Forest Insects.—Continuation of the preceding course, devoted to the study of insects attacking orchard and forest trees. The course includes field, laboratory, and bibliographic work.

2 or 3 units, either semester (Doane)

6. General Entomology.—A course of lectures and demonstrations. Open to students who have had some work in Biology (Zoology, Botany, or Physiology).

2 units, 2d semester (Kellogg)

7. Advanced Work.—Advanced study and investigation of the biology of insects. Laboratory and field work.

2 to 5 units, both semesters (Kellogg)

Work for graduate and special students will be specially arranged.

Major students in Entomology must obtain before graduation twenty-four units' credit in Entomology, and credit for course 1 in Zoology, course 1 in Botany, and course 3 in Systematic Botany, making forty units in biological subjects. Some previous work in Biology should be done before taking up any course in Entomology.

The *Entomological Collections* contain authoritatively determined specimens, accessible for comparison, in all of the insect orders, and include many sets of specimens illustrating the development and habits of insects. There is included, also, the most important existing collection of North American Mallophaga, comprising the types of four-fifths of all the species so far described from North America and the Pacific Islands, an unusually large collection of Coccidæ (scale insects), and a valuable series of specimens from the Galapagos Islands.

BIONOMICS

8. Organic Evolution.—Lectures on the laws or principles of biology and the factors in organic evolution. Not open to first-year students. Certain lectures in this course are given by Mr. Luther Burbank.

2 units, both semesters (Jordan, Kellogg)

9. Variation and Heredity.—Special pieces of work, on variation and heredity in insects, arranged for qualified students. This work includes the collecting and naming of series of individuals under controlled breeding and environmental conditions, and the statistical and quantitative study of the variation in these series. [Details as to credit and work hours to be arranged.] (KELLOGG)

Laboratory Fees

Three dollars per semester for each laboratory course.

GEOLOGY AND MINING

JOHN CASPER BRANNER, JAMES PERRIN SMITH, Professors.
JOHN FLESHER NEWSOM, Associate Professor.
DORSEY ALFRED LYON, AUSTIN FLINT ROGERS, Assistant Professors.
LOUIS JOHN MAYREIS, Instructor.
RODERIC CRANDALL, ROY SELDON KELLOGG, FRANK WARREN TURNER, Assistants.

Students intending to make Geology and Mining their major subject should offer, as a part of their entrance preparation, solid geometry, trigonometry, advanced algebra,* physics, chemistry, zoology, and French or German, or both; otherwise the mathematics, physics, and chemistry must be taken in the University.

Requirements for the Bachelor's Degree

The following is a summary of the courses that lead to the degree of Bachelor of Arts in Geology and Mining:

FIRST YEAR—Applied Mathematics 1 (10 units); Chemistry 1, *a*, 6, *b* (10 units); Engineering 1*a*, 1*b* (6 units); Physics 7 (4 units). Total 30 units.

(None of the first-year subjects offered in the second semester can be taken without the first semester's work. First-year students can therefore advantageously enter the course as outlined above only at the beginning of the first semester.)

SECOND YEAR—Applied Mathematics 2, 3 (16 units); Chemistry *d* (3 units); Civil Engineering 4*a* (5 units); Geology and Mining 5 (6 units); Mechanical Engineering 2 (2 units). Total 32 units.

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*Students presenting trigonometry and advanced algebra as entrance subjects are required to pass a satisfactory special examination in those subjects, otherwise the corresponding courses in Applied Mathematics must be taken during the first year in the University.

Third Year—Engineering, 2, 3*a* (8 units); Mechanical Engineering 3*c*, 6 (7 units); Geology and Mining 1, 2, 3*, 4*, 6, 9, 11*a*, 11*b* (20 units). Total 35 units.

Fourth Year—Geology and Mining 7*a* or 7*b*, 10*a*, 10*b* (11 units); Chemistry *e* or Geology and Mining 11*e* (3 units), Civil Engineering 8*c* (3 units); Mechanical Engineering 8*d*, 9 (4 units); Electrical Engineering 1 (4 units). Total 25 units.

Courses of Instruction

1. **Dynamic and Structural Geology.**—Lectures, with syllabus. 3 units, 1st semester (Branner)

1a. **Physiography.**—Lectures, with syllabus.
1 unit, 2d semester (Branner)

2. **Economic Geology.**—Lectures, with syllabus. Open to students who have completed course 1.
2 units, 2d semester (Branner, Newsom)

3. **Topographic Geology.**—Field and laboratory work, with the construction of geologic maps, models, and sections. Open to students who have completed course 1 in Geology, and course 4*b* in Civil Engineering.
4 units, summer vacation (Branner, Newsom, Crandall)

4. **Field Geology.**—Field practice in working out geology in the field and its representation upon topographic maps and sections. Prerequisites: Geology 1 and Civil Engineering 4*b*.
5 units, summer vacation
(Branner, Newsom, Rogers, Crandall)

5. **Mineralogy.**—(*a*) Methods of study and of determination of minerals, including Crystallography and Blowpipe Analysis (first semester); (*b*) Study of common and important minerals (second semester). Open to students who have taken or are taking qualitative analysis.
3 units, both semesters (Rogers, Turner)

6. **Petrography.**—*(a) Crystal optics and study of rock-forming minerals in thin sections (first semester); (b)* Study of principal rock types, igneous, sedimentary, and metamorphic (second semester). Prerequisite: Geology and Mining 5. 3 units, both semesters (Rogers)

7. **Paleontology.**—*(a) Systematic Paleontology, or the history and character of organisms (first semester); (b) Historical Geology, or the history and character of geologic*

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*Geology and Mining 3 and 4 (Topographic and Field Geology) must be taken during the summer vacation.

formations (second semester). Open to students who have completed course 1.

2 to 4 units, 1st semester; 4 units, 2d semester (SMITH)

8. Paleontology.—Original investigation of various problems in paleontology, especially of invertebrate morphology, and of the distribution of faunas. This course will consist entirely of private work, in field and laboratory. Open to advanced students and graduates.

2 to 5 units, both semesters (SMITH)

[9. **Assaying.**—Open to students who have completed course *d* in Chemistry and courses 1 and 2 in Geology. This course is the same as course *n* in the Department of Chemistry.]

3 afternoons, either semester (LENOX)

10. **Mining.**—*a.* Lectures on mining operations and methods, including prospecting, development, methods of working, timbering, shaft sinking, and hoisting.

4 units, 1st semester (NEWSOM, LYON, MAYREIS)

b. Continuation of *a*, including drainage, ventilation, and ore-dressing. 3 units, 2d semester (NEWSOM, MAYREIS)

11. **Metallurgy**:

11*a*. *General Metallurgy.*—Four lectures a week throughout the semester. Required of all Geology and Mining majors; open to others who have completed Chemistry 2.

4 units, 2d semester (LYON, MAYREIS)

11*b*. *General Metallurgy Laboratory.*—Open only to those who have completed course 9 and who are taking or have had course 11*a*. 2 units, 2d semester (LYON, KELLOGG)

11*c*. *Metallurgy of Constructive Materials.*—A study of the manufacture and physical properties of iron, steel, and other alloys, with reference to their selection as constructive materials. Two lectures a week, and an occasional afternoon of laboratory work. Students taking this course are expected to have a knowledge of Elementary Chemistry.

2 units, 1st semester (LYON, KELLOGG)

11*d*. *Metallography and Physics of the Metals.*—Recitations, reading, and laboratory work. Howe's "Iron, Steel, and Other Alloys" will be used as a text. The laboratory work will include a study of the microstructure of the industrial metals and alloys, and of the influence of chemical composition, thermal and mechanical treatment, upon their structure. Also the relation of the structure of metals and alloys to their physical properties. Open only to students who have completed Chemistry 2, *d*, and *j*.

3 to 5 units, either semester (LYON)

11*e*. *Metallurgical Laboratory.*—Considerable option will be allowed in the work of this course. A student may either take up some problem or problems in connection with the extraction of metals from their ores, such as the facilities of the laboratory will permit, or he may take up advanced work in the physics of metals, metallography, etc. Students wishing to take up work in connection with the extraction of metals from their ores must have completed Chemistry *d* and *e*, or their equivalent. Those wishing to take up advanced work in the physics of the metals, metallography, etc., must have completed Chemistry *d* and *j*, or their equivalent.

3 to 5 units, either semester (LYON, MAYREIS)

12a. Crystal Morphology.—Measurement, calculation, and delineation of crystals. 2 units, either semester (ROGERS)

12b. Mineralogy.—Original Investigations in Mineralogy and Petrography. This course consists entirely of private work in field and laboratory. Open only to advanced students and graduates.

2 to 5 units, both semesters (ROGERS)

13. Paleontology.—Lectures on special topics. Open to advanced students and graduates.

1 unit, 1st semester (SMITH)

14. Special Courses.—Special courses of instruction and training are laid out for advanced and special students according to the needs and qualifications of each individual. Special investigations are taken up by advanced students as rapidly as it is possible for them to undertake such work advantageously.

1 to 5 units, both semesters (BRANNER, NEWSOM)

[For courses in mine surveying, the designing of mining machinery and mine structures, and in mineral analysis, see Departments of Civil Engineering, Mechanical Engineering, and Chemistry.]

Laboratory and Syllabus Fees

Courses 1, 2, 10*b*, $2.50 each; course 3, $10; course 4, $15;

course 5, $3 each semester; course 6, $2 each semester; courses 10*a*, 11*a*, 11*c*, $5 each; course 11*b*, $20; courses 11*d*, 11*e*, $5 per unit of laboratory credit.

ENGINEERING

A. ENTRANCE SUBJECTS

Students intending to take their major in one of the Engineering Departments are advised, though not required, to present, among their entrance subjects, advanced algebra,* solid geometry, trigonometry,* physics, drawing, and German or French. Special students should have completed entrance English, elementary algebra, and plane geometry. (See pp. 36-62.)

In and after August, 1909, students must present among their entrance subjects solid geometry and trigonometry, in order to take the first year's work in applied mathematics for engineers. Those who fail to do this will not be able to graduate in less than five years.

B. GENERAL COURSES

I. Applied Mathematics

First-Year Courses:—Algebra; Co-ordinate Geometry.

Second-Year Courses:—Calculus; Theoretical Mechanics.

(See announcement of Department of Applied Mathematics, p. 131.)

II. General Technical Courses

1a. Linear Drawing and Lettering.—(Drafting two afternoons a week, September and October.) Open to all students, and required of students in Engineering. The instruments and materials for this course cost from twenty to thirty dollars. 1 unit, either semester (MAYREIS)

1b. Descriptive Geometry.—Including applications to shades, shadows, and perspective. (Two afternoons of drafting each week, November and December. Two lectures and two afternoons of drafting each week, January to May.)

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*Courses B and 1*a* in Applied Mathematics are required of all first-year students in Engineering, except such as have credit in the corresponding entrance subjects and also pass special examinations (see announcement of the Department of Applied Mathematics, p. 131).

This course is open to students who have completed or who are taking Solid Geometry and Engineering 1*a*, and is required of students in Engineering.

1 unit, 1st semester; 4 units, 2d semester (MAYREIS)

2. Applied Mechanics:

a. Mechanics of Materials.—Under this head are treated the theory of the strength and elastic properties of the ordinary materials of engineering construction. The main subjects covered are simple tension, compression, and shear; theory of flexure, with applications to simple and continuous beams; theory of long columns; torsion; repeated stress; sudden stress and resilience. (Lectures and recitations three hours a week.)

b. Testing of Materials.—Each student is required to make a series of experiments, testing the strength and elastic properties of wrought iron, cast iron, steel, and wood. A careful record of all experiments is required of every student. (Laboratory work, six hours a week.)

Open to students who have completed the first- and second-year courses for Engineering students in Applied Mathematics; required of all students having Engineering as a major subject. 5 units, 1st semester (WING, CARTER)

3. Hydraulics:

a. Hydrostatics and Hydraulics.—This course treats of fluid pressure, the principles of fluid equilibrium, and the laws governing the flow of water through orifices, over weirs, in closed conduits, and in open channels. Open to students who have completed courses 2 and 3 in Applied Mathematics.

3 units, 2d semester (HOSKINS)

b. Hydraulic Motors.—A discussion of the theory of the main types of turbines, including centrifugal pumps. A few lectures on the general theory of energy and on relative motion are given as an introduction to the course. Open to students who have completed course 3*a*.

3 units, 1st semester (HOSKINS)

I. CIVIL ENGINEERING

Charles David Marx, Charles Benjamin Wing, Leander Miller Hoskins, Professors.

John Charles Lounsbury Fish,* Associate Professor.

Hubert Harry Hall, Instructor.

Myron Carlos Burr, Sanford Ballard Dole, Everett St. John Dunbar, William Watkin Edwards, Louis John Mayreis, Stuart Moser, Charles Hugh Paxton, Carl McKee Hoskinson, Arthur Dickinson Hughes, Assistants.

A. Topographic Engineering

4a. **Elementary Surveying.**—Instruments; systems of coordinates; methods of surveying; latitude and azimuth; errors of observation; surveys; computing and mapping. (Lectures two hours, drafting and field work nine hours, each week.) Open to students who have completed Engineering 1*a* and Applied Mathematics 1. Required of students in Civil and Mining Engineering.

5 units, either semester (Hall, Burr, Carter)

4b. **Elementary Surveying.**—Course 4*a* abridged for students in Mechanical and Electrical Engineering. (Field work, reading, and drafting, six hours each week.)

2 units, 1st semester (Hall)

B. Railroad Engineering

6a. **Railroad Surveying.**—Including the transition curve and earthwork. (Recitations two hours, drafting and field work nine hours each week.) Open to students who have completed 4*a*. Required of students in Civil Engineering.

5 units, 2d semester (Hall, Burr, Carter)

6b. **Railroad Location.**—Economics of location. Open to students who have completed 6*a*.

2 units, 1st semester (Fish)

6c. **Railroad Construction.**—(Drafting-room, two afternoons a week.) Open to students who have completed 6*a*, and who have taken or are taking 8*b*.

2 units, 2d semester (Fish)

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*Absent on leave.

C. Structural Engineering

8a. Elementals of Design.

1. *Materials.*—[See course 11*c*, Geology and Mining.]

2. *Mechanics of Structures.*—Course 3 in Applied Mathematics is extended to the analytical and graphical determination of stresses in simple trusses. (Drafting-room, nine hours a week first half of semester.)

3. *Theory of Structural Details.*—Course 2 is extended to an investigation of the distribution of stresses in structural details. (Drafting nine hours a week, last half of semester.)

Open to students who have completed course 1 in Engineering, and who have taken or are taking course 2 in Engineering, and also course 11*c* in Geology and Mining. Required of all students having Civil Engineering as a major subject.

3 units, 1st semester (Wing)

8b. Elements of Design.

1. *Materials.*—Structural materials, other than metals, are studied from an engineering standpoint. Wood, stone, brick, limes, cement, etc., are considered in order. (Lectures three hours a week first half of semester.)

2. *Foundations.*—Under this head are considered the bearing power of soils, strength of piles, distribution of pressures, and similar details connected with the design of simple foundations. (Lectures three hours a week last half of semester.)

3. *Design.*—Complete designs are made, including working drawings, bill of materials, and estimate of cost, of some simple structure, such as a mill building or highway structure. (Drafting-room, nine hours a week first half of semester; six hours a week last half of semester.)

4. *Testing.*—Extending the work of course 2*b*. Each student is required to make a series of experiments, testing the physical properties of cement. (Laboratory, three hours a week last half of semester.)

Open to students who have completed course 8*a* in Civil Engineering; required of all students having Civil Engineering as a major subject. 5 units, 2d semester (Wing)

8c. Elements of Design.—Courses 8*a* and 8*b* abridged to meet the requirements of students having Mining, Mechanical, or Electrical Engineering as a major subject. Special applications are made to hoisting and conveying structures, mill buildings, and central station buildings. (Hours to be arranged by consultation.)

Open to students who have completed courses 1 and 2 in Engineering, and course 11*c* in Geology and Mining.

3 units, 2d semester (WING)

9. **Railway Bridges.**—This course comprises the determination of the stresses in modern types of railroad bridges, including cantilever and swing spans, masonry arches, and arch ribs; the discussion of the most economical types, spans, and dimensions of bridges and bridge members; the study of the methods of constructing sub-aqueous foundations, shop methods, erection, inspection of material, specifications, and other factors influencing the design of bridges. Designs are made by each student to fulfill actual conditions, the parts proportioned, and bills of material prepared. Open to students who have completed course 8. (Lectures two hours per week, drafting nine hours.)

5 units, both semesters (WING)

D. Hydraulic Engineering

12. **Water-Supply Engineering for Towns and Districts.**—Sources of supply. Collecting and storing of water, either for water supply of towns or for irrigation purposes. Settling, filtering, conducting, and delivering of water, including the study and design of all accessory works. (Three hours lectures and recitations, six hours drafting.) Open to students who have completed courses 2 and 3 in Engineering and 4*a* and 8*a* in Civil Engineering; required of all students who take their major in Hydraulic Engineering.

5 units, 1st semester (MARX)

13. **Sanitary Engineering.**—Including sewerage of towns and drainage of lands. Special attention will be given to the study of all municipal sanitary problems, such as removal of sewage, destruction of garbage, construction, maintenance, sweeping, and repairs of streets and pavements. (Three hours lectures and recitations, six hours drafting.) Open to students who have completed courses 2 and 3 in Engineering and 4*a*, 8*a*, and 12 in Civil Engineering; required of all students who take their major in Hydraulic Engineering.

5 units, 2d semester (MARX)

15. **Construction of Canals, River and Harbor Improve-**

ments.—Lectures and designing as per arrangement. Open to students who have completed courses *2a*, *2b*, and 3 in Engineering, and *4a* and *8a* in Civil Engineering.
2 units, both semesters (MARX)

16. **Technical Seminary.**—Study of German and French technical journals. Open only to fourth-year students in Civil Engineering. 2 units, both semesters (MARX)

II. MECHANICAL ENGINEERING

WILLIAM FREDERICK DURAND, Professor.
GUIDO HUGO MARX, Associate Professor.
WILLIAM RANKINE ECKART, Assistant Professor.
LAWRENCE EDMINSTER CUTTER, CHARLES NORMAN CROSS, JULIUS EMBERT PETERSON, EDWARD JOHN STANLEY, JAMES BENNETT LIGGETT, THEODORE PALMATEER, Instructors.

The courses specified below represent the major work for the undergraduate degree with Mechanical Engineering as a major subject. In addition, the typical work for this major includes the following courses in other departments:

Applied Mathematics 1, 2, 3; Engineering *1a*, *1b*, 2, *3a*, *3b*; Physics 7 and 6, or 7 and 3; Chemistry 1 and *a*; Metallurgy *11c*; Electrical Engineering 1.

Students entering with advanced credit may also elect such other work as time and preparation permit.

1. **Shop Work**:

a. Woodworking.—(Two exercises a week, half year.)
b. Pattern-Making.—(Three exercises a week, half year.)
c. Forge Work.—(Two exercises a week, half year.)
d. Foundry Work.—(Three exercises a week, half year.)
e. Machine Shop Work.—(Three exercises a week, through the year.)

Open to all students, and required of students in Mechanical Engineering. 2 or 3 units, each semester
(PETERSON, STANLEY, LIGGETT, PALMATEER)

2. **Elementary Machine Drawing.**—Practice in making freehand sketches of machine parts from which working drawings, tracings, and blueprints are developed. (Six hours a week in drafting-room.) Prerequisite: course *1a* in Engineering. 2 units, either semester (CUTTER)

3. Elementary Machine Design:

a. Function of machines; motion, force, and work in machines; valve gears. (Three hours a week, lectures, and recitations, second semester.)

b. Drafting course applying the principles treated in *a.* (Six hours a week drafting, second semester.)

c. An abridged drafting course intended for major students in Geology and Mining. (Three hours per week; one unit of credit.)

Prerequisites: course 2 in Mechanical Engineering and course 1*b* in Engineering. Either *b* or *c* must be taken in connection with *a.* Courses *a* and *b*, are required of students in Mechanical Engineering.

4 or 5 units, 2d semester (G. H. MARX)

4. Machine Design.—Study of machine details, such as fastenings (including bolts and screws, riveted joints and boiler design, fits and fitting); axles, shafts, and spindles; journals, boxes, and lubrication; ball and roller bearings; sliding surfaces; couplings and clutches; gear belt, rope, and chain transmission systems; flywheels, springs, frames, and supports. (Two hours a week recitations and lectures, six hours in the drafting-room, throughout the year.) Open to students who have completed course 3 in Mechanical Engineering, and who are taking course 2 in Engineering; required of students in Mechanical Engineering.

4 units, both semesters (G. H. MARX)

5. Advanced Machine Design.—A drafting-room course consisting of the design of complete machines. Students may elect machine tools, cranes, steam or gas engines, or special problems. Intended for fourth-year students who have completed courses 4 and 6.

2 units, both semesters (G. H. MARX, CUTTER)

6. Heat Engines.—Mechanical theory of heat and its applications. (Two lectures and three hours' office work per week.) Required of third-year students in Mechanical Engineering. 3 units, both semesters (DURAND)

7. Thermodynamics.—A course in theoretical thermodynamics, with special reference to heat engines, and intended to supplement course 6, which is a prerequisite. Required of fourth-year students in Mechanical Engineering.

1 unit, 1st semester (DURAND)

8. Experimental Engineering:

a. Calibration and Use of Engineering Apparatus and Instruments, including gages, thermometers, planimeters, indicators, dynamometers, meters, steam calorimeters, fuel calorimeters, and the testing of lubricating oils. (One lecture and six hours in the laboratory per week.) Open to students who have completed course 6. Required of third-year students in Mechanical Engineering.

3 units, 2d semester (ECKART, CROSS)

b. Testing of Steam Engines and Boilers, including determination of engine clearance; valve setting; mechanical efficiency, economy and complete tests of simple and compound engines, steam turbines, gas engines; tests for speed regulation, and the testing of boilers. (One lecture and six hours in the laboratory per week.) Open to students who have completed course 8*a*. Required of fourth-year students in Mechanical Engineering.

3 units, 1st semester (ECKART, CROSS)

c. Testing of Pumping Machinery and Power Plant Auxiliaries, including steam and centrifugal pumps, hot-air pumping engines, injectors, heaters and economisers, blowers, condensers, refrigerating machinery, and a complete power-plant test. (One lecture and six hours laboratory per week.) Open to students who have completed courses 8*a* and 8*b*. Required of fourth-year students in Mechanical Engineering.

3 units, 2d semester (ECKART, CROSS)

d. An Abridged Course in Experimental Engineering, intended for Civil Engineering, Geology and Mining, and Chemical Engineering students. Includes the calibration of apparatus, testing of steam and gas engines, steam turbines, boilers, pumps, and water wheels. (One lecture and six hours in the laboratory per week.) Open to students who have completed course 6.

3 units, 1st semester (ECKART, CROSS)

9. Pumping Machinery.—A lecture course for fourth-year students. Prerequisite: course 6, first semester.

2 units, 2d semester (DURAND)

10. The Mechanical Engineering of Central Power Stations. Lectures. Prerequisite: course 6.

2 units, 1st semester (DURAND)

11. **Seminary.**—A weekly conference for the discussion of current engineering literature and of special topics. Open to fourth-year students only.

1 unit, both semesters (DURAND)

Shop and Laboratory Fees

Courses 1*a*, 1*b*, 1*c*, 1*d*, four dollars each; course 1*e*, five dollars per semester; course 8, six dollars per semester.

III. ELECTRICAL ENGINEERING

HARRIS JOSEPH RYAN, Professor.
KENNETH LIVERMORE CURTIS, Assistant Professor.
SAMUEL BARCLAY CHARTERS, JR., Instructor.

The courses specified below represent the major work for the undergraduate degree with Electrical Engineering as major subject. In addition, the typical work for this major includes the following courses in other departments:

Applied Mathematics, 1, 2, 3; Engineering 1*a*, 1*b*, 2, 3*a*, 3*b*; Mechanical Engineering 1, 2, 3, 6, 8, 10; Physics 6*a*, 6*b*, and 9; Chemistry 1 and *a*.

Students entering with advanced credit may also elect such other work as time and preparation permit.

1. **Elements of Electrical Engineering.**—An abridged course in the industrial applications of electricity, intended for nonelectrical engineering students. Two laboratory lectures, one recitation, and one two-hour computing period per week. Prerequisites: courses 1, 2, and 3, in Applied Mathematics and course 6*b* in Physics. 4 units, 1st semester (CURTIS, CHARTERS)

2. **Electrical Energy.**—Required of third-year students in Electrical Engineering. Class and laboratory instruction in the technology of magnetic, electric, and electrostatic phenomena, electrical machinery and auxiliaries in continuous and alternating current working:

a. Recitations and Experimental Demonstrations.

1 unit, 1st semester; 4 units, 2d semester (CHARTERS)

b. Laboratory Work.

4 units, 2d semester (CHARTERS)

[Course 2 is supplemented by Physics 9, laboratory work in electrical measurements (4 units, first semester).]

3. **Electrical Engineering.** — Required of fourth-year students in Electrical Engineering. Lectures, laboratory work, and design problems.

a. Lectures upon: (1) Structural elements and characteristics of standard electrical machinery and auxiliaries; (2) Standardization authorized by A. I. E. E.; (3) Systems of generation, control, distribution, and use of electrical energy; (4) Economy in transmission, Kelvin's law; (5) Power plants; (6) Fire hazard, National Electrical Code; (7) Municipal distribution of electricity for lighting, railways, power, and miscellaneous service; (8) Long distance transmission of power for general purposes; for railways; (9) Discussion of typical installations; (10) Elements of finance controlling the uses of electricity; (11) Survey of the electrical industries; (12) Historical and biographical sketches.

3 units, both semesters (RYAN)

b. Laboratory Work.—Characteristic performance of standard machinery and auxiliary apparatus; engineering tests of magnetic materials, conductors, and insulations; illumination tests of arc and incandescent lamps; tests of machinery and auxiliaries for capacity, acceptance, and technical data.

4 units, 1st semester (CURTIS)

c. Design.—Predetermination of the characteristic behaviour of standard machinery from given forms and dimensions; comparison of results with those obtained by actual test in the laboratory. Elementary designs of power plants and systems of distribution; study of corresponding practice as reported in the literature and by visits to neighboring plants.

4 units, 2d semester (RYAN)

4. **Transmission of Intelligence.**—Lectures on telephony, land, submarine, and wireless telegraph. Open to fourth-year students in Electrical Engineering.

1 unit, each semester (CHARTERS)

5. **Electric Railways**:

a. Electric Railway Equipment (first semester).

b. Principles of Electric Railway Practice (second semester).

Open to fourth-year students in Engineering.

1 unit, both semesters (CHARTERS)

The Stanford Electrical Society is an organization maintained by the members of the Senior class, for oral discussion of electrical topics assigned and review of current electrical literature, including the transactions of the A. I. E. E.

Laboratory Fees

Two dollars per unit of university credit.

THE UNIVERSITY LIBRARY

MELVIN GILBERT DODGE, Associate Librarian.
JOHN EDWARD GOODWIN, Supervisor Stacks and Loans.
LILLIAN PEARLE GREEN, Reference Librarian.
MARTHA ELIZABETH HAVEN, Supervisor Accessions.
ALICE NEWMAN HAYS, Classifier.
FLORENCE HUGHES, Head Cataloguer.
HARRIETTE MILES, Supervisor Serials.
HELEN BINNINGER SUTLIFF, Cataloguer.
BELLE HEBER THOMPSON, Chief Desk Assistant.

The Thomas Welton Stanford LIBRARY BUILDING, occupying the central portion of the eastern half of the Outer Quadrangle façade, has a frontage of 160 feet, and an extreme width, including ell, of 158 feet. The stack room which forms the ell, is 70 x 74 feet. The main reading-room has a seating capacity of two hundred and twenty. On the first floor are also the cataloguing-room, reference libraries, and offices; on the second floor, six seminary rooms.

The Library is open every University week day from 8 a. m. to 10 p. m., and on Saturday and during the shorter vacations from 8 a. m. to 3:30 p. m. Special hours are arranged for the summer vacation. Officers of the University, and students engaged in advanced work, upon recommendation of their instructors, have access to the shelves. Books that are not needed for special reference work are loaned for home use for a period of three weeks. The card-catalogue includes entries under author, title, and subject. Cards have been made for all the books received since 1900, and for the major part of those received earlier.

The Library now numbers ninety-three thousand volumes. During the year ending July 31, 1906, there were added 4,829 volumes. Of these, 1,637 were by gift, the most notable being from Mr. Thomas W. Stanford, President David S. Jordan, Mr. Timothy Hopkins, and Mr. Charles G. Lathrop.

The Library contains the following special collections:

The Timothy Hopkins Railway Library of six thousand volumes. This collection is unusually rich in material for the study of the early history of railways in Europe and America. A catalogue of the Library has been published.

The Thomas W. Stanford Australasian Library of several thousand volumes and pamphlets relating to Australasia.

The Hildebrand Library, consisting mainly of works on Germanic Philology and Literature collected by the late Professor Hildebrand of Leipzig.

The David Starr Jordan Library of Zoology, consisting of several thousand books and pamphlets on fishes.

Notable among private libraries to which students have access is Dr. Branner's Geological Library, a list of whose periodicals is included in the University Library catalogue.

General Bibliography.—The aim of this course is to give practical aid to students in the preparation of bibliographies. Bibliographical method, the bibliographies of special subjects, and the principal books of reference will be discussed, and individual work carried out under direction in the University Library. 1 unit, 2d semester (Dodge)

THE MEMORIAL CHURCH

The Rev. David Charles Gardner, Chaplain.
Benjamin Colman Blodgett,* Organist.

During 1906-07 the services of the Memorial Church have been held in the University Chapel. These have consisted of preaching services Sunday mornings at 11 o'clock, and Vespers Thursday evenings at 7 o'clock.

University Preachers, 1906-07

The Rev. Raymond C. Brooks (Congregational), Oakland.
The Rev. Jacob Nieto (Jewish), San Francisco.
The Rev. Dwight E. Potter (Presbyterian), Oakland.
The Rev. Frederick W. Clampett, D. D. (Episcopal), San Francisco.
The Rev. Ernest E. Baker (Presbyterian), Oakland.
The Rev. Charles Reynolds Brown, D. D. (Congregational), Oakland.
The Rev. M. J. McLeod (Presbyterian), Pasadena.
The Rev. Francis Greenwood Peabody (Unitarian), Harvard University.

Baccalaureate Sermon, September 16, 1907

The Rt. Rev. William Ford Nichols, D. D., Episcopal Bishop of California.

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*Absent on leave.

LECTURES, RECITALS, DEBATES, ETC.

BEFORE THE UNIVERSITY

President CHARLES R. VAN HISE, University of Wisconsin—*Earth Movements.*

Dr. SAMUEL M. ZWEMER—*The Moslem World.*

Dr. DAVID BARROWS, Superintendent of Public Instruction, Philippine Islands—*Education in the Philippines.*

The Rev. ENDICOTT PEABODY, Groton, Mass.—*Sanctification for the Sake of Others;* The Rev. JAMES E. FREEMAN, Yonkers, N. Y.—*The Glory of Personality.*

UNDER AUSPICES OF THE CHRISTIAN ASSOCIATIONS

Mr. REDOLPHO BRAUN HUMMEL, '04—*Mission Work in Africa.*

Mr. NG POON CHEW, San Francisco—*Confucius and Confucianism.*

UNDER AUSPICES OF THE TEMPERANCE STUDY LEAGUE

The Rev. GEORGE W. WHITE, D. D., San Francisco—*The Condition of the Liquor Traffic in San Francisco since April 18, 1906.*

MUSICAL RECITALS, ETC.

1. Presentation of *The Original Mrs. Tewksbury,* by the Senior Class.
2. Presentation of Ibsen's *Hedda Gabler,* by the Constance Crawley Company.
3. Presentation of *Two Gentlemen of Verona,* by Sword and Sandals.
4. Concert by Mackenzie Gordon.
5. Presentation of George Bernard Shaw's *You Never Can Tell,* by the Sophomore Class.
6. Presentation of Lessing's *Minna von Barnhelm,* by the German Club.
7. Concert by the Chicago Symphony Orchestra.

UNIVERSITY ASSEMBLIES

1. Rev. DAVID CHARLES GARDNER—*Social Problems and Social Betterment;* Rev. GEORGE HODGES, D. D.—*The Social Service Movement at Stanford.*

2. President David Starr Jordan; Mr. Clarence F. Laumeister.

3. Professor Thomas R. Bacon, University of California—*Student Life at Yale University Thirty-five Years Ago.*

4. Mr. Robert E. Speer—*Margins of Life;* Mr. Luther Burbank, Santa Rosa.

5. Mr. James D. Phelan, San Francisco—*Politics in San Francisco.*

6. Mr. Richard M. Hotaling, San Francisco; Mr. Douglas Erskine, San Francisco.

7. Mr. Fairfax Wheelan, San Francisco—*Relief Work in San Francisco.*

8. President David Starr Jordan—*Young Men That Are Wanted;* Professor George Hempl—*Phases of University Life.*

9. The Hon. George C. Pardee, Oakland—*The Citizen and Politics.*

10. Mr. William R. George, New York—*The George Junior Republic.*

11. Professor Francis Greenwood Peabody, Dean of Harvard University Divinity School—*Ideals of University Life in America and Germany.*

12. Mr. Lincoln Steffens, New York—*Graft.*

13. Professor H. Morse Stephens, University of California—*Certain Features of Oxford*; Mr. Rudolph J. Taussig, San Francisco—*Trade Schools.*

14. Mr. Francis J. Heney, San Francisco—*Municipal Conditions in San Francisco.*

Commencement Address—September 15, 1906

President Benjamin Ide Wheeler, University of California—*Orthography.*

Intercollegiate Debate

An Intercollegiate Debate, under the auspices of the Associated Students of the University of California and of the Leland Stanford Junior University, is held in April of each year. In 1907 the debate was held at the University of California.

The question for 1907 was, "Resolved, That the efforts of President Roosevelt to extend the powers and functions of the Federal Government should not be approved by the American people."

The Stanford contestants were Gilbert Dane Ferrell, William Fraser Herron, and Claude C. McColloch; alternate

LLOYD NEWLAND. The debate was won by the University of California.

CARNOT DEBATE

The Carnot Medal, presented by the Baron de Coubertin, for the purpose of encouraging the study and discussion, in California, of French history and politics, is awarded annually to the student who, in the opinion of the judges, proves himself the best debater in a contest held for the purpose between Stanford University and the University of California.

Under the rules of 1907 a general subject for the debate was announced November 15, 1906, but the particular phase of the question, as embodied in a resolution, was not made known to the contestants until two hours before the time set for debate.

The general subject for 1907 was French Government and Socialism, and the particular question debated was, *"Resolved,* That the success of French Socialism, as defined in the recent program of the Socialist party, will make for international peace." The debate was held at Stanford University, February 1, 1907. The contestants were MAURICE EDWARD HARRISON, SAYRE MACNEIL, and EUSTACE MADERO PEIXOTTO, of the University of California; and WILLIAM FRASER HERRON, CLAUDE C. McCOLLOCH, and WILLIAM CORTEZ SHELTON, of Stanford. The judges were Judge PETER SHIELDS, the Rev. H. H. McQUILKIN, and Mr. ALBERT BONNHEIM. The medal was awarded to WILLIAM FRASER HERRON, of Stanford University.

THE BONNHEIM ETHICAL DISSERTATIONS AND DISCUSSION

The purpose of the Bonnheim dissertations and discussion, as defined by the founder, Mr. Albert Bonnheim, of Sacramento, is as follows: "It is not so much desired to obtain new facts or new truths in ethics as it is to place the truth which we now have before as many students as possible, so that they will take greater interest in questions dealing with ethical problems." The competition is open to all undergraduate students of Stanford University, and is divided into two parts:

1. *The Bonnheim Dissertations.*—The general regulations governing the competition are as follows: Each competitor must deposit with the Registrar before the first day of November an essay upon the subject assigned by the committee. The essays must not be signed, but should have some mark

of identification and be accompanied by a sealed envelope containing the name of the author. They must be typewritten on thesis paper of regulation size. They should be preceded by an outline and a bibliography, and should have accurate references. No limit of length is prescribed, but a treatment not to exceed ten thousand words is recommended. The judges will announce the names of the five competitors who present the best Bonnheim dissertations, and to as many of them as shall be deemed meritorious will be awarded premiums of $20 each.

2. *The Bonnheim Discussion.*—The winners of the Bonnheim premiums for dissertations shall be qualified to engage in the discussion, which will be upon the same subject as the dissertations, and which will be held the first or second week in December. The Bonnheim prize of $150 will be awarded to the speaker who in his discussion of the subject shows the clearest insight and makes the most effective presentation. Each speaker will be allowed twenty minutes.

The general subject for 1906 was "The Ethics of the Modern Newspaper." The judges of the dissertations were Mr. SAMUEL TRAVERS CLOVER, of Los Angeles, Mr. ALFRED HOLMAN, of Sacramento, and Professor THORSTEIN B. VEBLEN; of the discussion, Mr. WILLIAM A. BEASLY, of San Jose, Rev. SYDNEY SNOW, of Palo Alto, and Professor VERNON L. KELLOGG. Premiums were awarded to CHARLES LAURANT BEAL, '08; PERCY ADELBERT GERLACH, '09; WILLIAM FRASER HERRON, '08; JOHN DAVID HOUSER, '10; JOHN W. MALOY, '07. The Bonnheim prize was won by JOHN W. MALOY.

The general subject for 1907 is "The Ethics of Racial and National Exclusiveness." The essays are due at the Registrar's Office October 31. The judges will announce the Bonnheim premiums November 22, and the discussion will take place December 6.

PHILOLOGICAL ASSOCIATION

Professor AUGUSTUS TABER MURRAY, President.
Assistant Professor JEFFERSON ELMORE, Secretary.

The UNIVERSITY PHILOLOGICAL ASSOCIATION was organized September 17, 1892, for the purpose of reading and discussing results of scientific investigations in language and literature. The membership consists of the instructors and advanced students in the different language departments in the University. The regular time of meeting is the first Thursday of each academic month, excepting September, January, and May, at 2:30 p. m. The following papers were presented during the calendar year ending March, 1907:

April 5, 1906. Assistant Professor JEFFERSON ELMORE—*On Certain Pronominal Usages in Plato.* Mr. EDWARD KIRBY PUTNAM—*King Arthur's Northern Wars.*

October 4. Professor H. RUSHTON FAIRCLOUGH—*Professor Tyrrell's Criticisms of Horace.* Associate Professor OLIVER MARTIN JOHNSTON—*The Survival of the Imperfect Indicative of Latin Fieri in Old Italian.*

November 1. Professor MAX FARRAND—*Textual Criticism of Certain American Historical Documents.* Assistant Professor JEFFERSON ELMORE—*On Plato, Rep. 397 b.*

December 6. Professor JOHN ERNST MATZKE—*The Old French Lay of Eliduc.* Assistant Professor BENJAMIN OLIVER FOSTER—*Propertius' Auceps.*

February 6, 1907. Professor AUGUSTUS TABER MURRAY—*The Bucolic Poems of Theocritus.* Associate Professor OLIVER MARTIN JOHNSTON—*The Legend of the Forbidden Apple.*

March 9. Assistant Professor RAYMOND MACDONALD ALDEN—*The Use of Prose in the English Drama.* Assistant Professor HENRY DAVID GRAY—*The Significance of the Scansion of Certain Lines of Macbeth and of the Ring and the Book: an Analogy.*

THE SCIENCE ASSOCIATION

Associate Professor GEORGE CLINTON PRICE, President.
Associate Professor FRANK MACE MCFARLAND, Vice-President.
Associate Professor ROBERT ECKLES SWAIN, Secretary.

The Science Association was organized January 17, 1894. Original investigations and papers of general interest on scientific topics are presented from time to time.

The following papers were read before the Association between April, 1906, and April, 1907:

Professor EDWARD CURTIS FRANKLIN—*Reactions in Liquid Ammonia.*

Assistant Professor WILLIAM RANKINE ECKART—*The Steam Turbine.*

Professor DOUGLASS HOUGHTON CAMPBELL—*Botanical Investigations in the Eastern Tropics.*

Associate Professor HAROLD HEATH—*The Recent Eruption of Vesuvius.*

Professor VERNON LYMAN KELLOGG—*Heredity and Its "Laws."*

Professor OLIVER PEEBLES JENKINS—*Some Problems in the Physiology of the Nervous System.*

SOCIAL SERVICE CLUB

WALTER YEELING WENTZ, '06, President.
ELSIE BRANNER, '07, Secretary.
JOHN EZRA McDOWELL, '00, Treasurer.

The STANFORD SOCIAL SERVICE CLUB was organized March 22, 1906, (1) to foster in the life of the University the ideals of social service, (2) to study social problems, social betterment, social settlements, and political science, and (3) to establish eventually a Stanford University Settlement, in San Francisco, and other centers of social work. Several University Assemblies have been held under the auspices of the Club, and in addition papers and addresses have beeen presented as follows during 1906-07:

1. The Rev. DAVID CHARLES GARDNER, Professor RUFUS LOT GREEN, and Professor GUIDO HUGO MARX—*Stanford Relief Work in San Francisco.*
2. Mr. OSCAR K. CUSHING, President of the State Board of Charities and member of the San Francisco Rehabilitation Committee—*Social Conditions in San Francisco and in California.*
3. Mr. NG POON CHEW, Editor of the Chinese Daily of the Pacific Coast—*Oriental Exclusion.*
4. Mr. WALTER McARTHUR, Editor of the Coast *Seamen's Journal*—*The Labor Problem on the Pacific Coast.*
5. Mr. WILLIAM R. GEORGE, Founder of the George Junior Republic—*Social Conditions in New York City during the Roosevelt Reform.*
6. Mr. IRA BROWN CROSS—*Socialism.*
7. Mr. JACK LONDON, Oakland—*The Revolution.*
8. Father RUSSELL WILBUR, Chicago—*Socialism from the Standpoint of the College Man.*
9. Mr. FRANCIS J. HENEY, San Francisco—*Graft in San Francisco.*

THE MARINE BIOLOGICAL LABORATORY

Professors Charles Henry Gilbert and Oliver Peebles Jenkins, Directors.

The Marine Biological Laboratory, founded by the liberality of Mr. Timothy Hopkins, of Menlo Park, is an organic part of the University, and constitutes a summer session for advanced biological study. The buildings are located at Pacific Grove, two miles west of Monterey, and stand on a low bluff immediately facing the sea. They consist of two two-story structures capable of accommodating about eighty students, and contain four general laboratories, one lecture-room, seventeen private rooms for special investigators, and a dark-room for photography. They are provided with aquaria, running water, and all necessary facilities for biological study. The library and apparatus of the University are available for use in the Laboratory.

Session of 1906

The Fifteenth Session of the Laboratory was held during the summer of 1906, beginning June 4th.

Instructors

Associate Professor George Clinton Price (Zoology).
Assistant Professor Clara S. Stoltenberg (Physiology).
Instructor Harry Baker Humphrey (Botany).
Assistant Hubert Oliver Jenkins (Zoology).

Students

I. Occupying Investigators' Rooms

Allen, William F., A. M., Pacific Grove, Cal.

Child, Charles Manning, Ph. D., Assistant Professor of Zoology, University of Chicago.

Frandsen, Peter, A. M., Professor of Biology, University of Nevada.

Greene, Charles Wilson, Ph. D., Professor of Physiology, University of Missouri.

Kennedy, Patrick Beveridge, Ph. D., Professor of Botany, University of Nevada.

II. Taking Regular Courses

ACKERMAN, IRVING CHARLES, Student in Law, University.
ALEXANDER, DAVID CLIFFORD, Student in English, University.
ALTNOW, GEORGE GUSTAV, Student in Philosophy, University.
BARTRUFF, JEANETTE ELEANOR, Student in Latin, University.
BERRY, SAMUEL STILLMAN, Student in Chemistry, University.
BRAWLEY, LEE JAY, Student in Economics, University.
BROWN, ALICE MAY, Teacher in Public Schools, Pacific Grove.
BRYAN, MARY CATHERINE, Student in Botany, University.
COE, GEORGE CLIFFORD, Student in Physiology, University.
DUDLEY, ERNEST GRISWOLD, Student in Systematic Botany, University.
FERGUSSON, JAMES GRANT, Student in Latin, University.
FOY, FLORENCE, Student in Economics, University.
GERLACH, PERCY ALBERT, Student in Physiology, University.
HALSEY, STELLA DUFFIELD, Student in History, University.
HODGDON, EMMA FLORETTE, Student in French, University.
HAMPSON, JOSEPH HALE, Student in Chemistry, University.
HECHE, ARTHUR, Principal of Public Schools, Niles, California.
HEMPHILL, JOHN PARKS, Student in Economics, University.
HILLER, RACHEL ROSE, Student in Latin, University.
HIGLEY, ROSE MIRIAM, Student in Zoology, University.
HOLBROOK, MARY A., Teacher in Kobe College for Women, Kobe, Japan.
HOUGHLAND, JANET BERRY, Student in History, University.
JENKINS, ALICE MABEL, Student in Physiology, University.
JOHNSON, HENRY ROLAND, Student in Geology, University.
LACHMUND, RALPH HENRY, Student in Law, University.
LEWIS, HELEN ANNETTE, Student in Miss Harker's School, Palo Alto.
MACFARLAND, JOHN COBB, Student in Law, University.
McMURPHY, JAMES IRA WILSON, Student in Zoology, University.
MACPHERSON, DOROTHEA, Student in English, University.
MIRRIELEES, LUCIA BUSH, Student in English, University.
MIRRIELEES, EDITH R, Student in English, University.
PATTERSON, MABEL, Student in Botany, University.
PATTERSON, ROSE W., Student in Entomology, University.
PERKINS, BRIGHAM ANDREW, Student in Physics, University.
PERRY, CLAIRE M., Student in Romanic Languages, University.
PETERSON, ELSA, Student in English, University.
POOR, HERBERT EMERY, Student in Chemical Eng., University.

Procter, James Norris, Student in Zoology, University.
Roberts, Ruberta Augusta, Student in Zoology, University.
Ross, Carl Thorburn, Student in Physiology, University.
Ross, Lee Thornton, Student in History, University.
Schneider, Florence Margaret, Student in Botany, University.
Sprague, Helen Louise, Student in Economics, University.
Stillman, Edgar, Student in German, University.
Stillson, Harriet Alice, Student in German, University.
Smith, Caroline R., Student in French, University.
Stevens, Esther Stuart, Student in English, University.
Stewart, John Elmer, Student in Law, University.
Sutliff, Nina D., Student in Miss Harker's School, Palo Alto.
Weymouth, Frank Walter, Student in Zoology, University.
Wiltz, Bertha, Teacher in Public School, Palo Alto, Cal.
Wynne, Stella Frances, Student in English, University.
Young, William Thomas, Student in Physiology, University.

Session of 1907

The Sixteenth Session will begin Monday, June 3d, and will extend over a period of six weeks, closing Saturday, July 13th. The laboratory will be under the general supervision of Associate Professor George Clinton Price.

Instructors

Associate Professor George Clinton Price.
Assistant Professor John Otterbein Snyder.
Assistant Professor Clara S. Stoltenberg.
Instructor, Harry Baker Humphrey.

Courses of Instruction

1. **General Zoology.**—An elementary course open to all students, and to teachers and others who desire an acquaintance with the anatomy and life-history of marine animals and with the methods pursued in laboratory study. (Price)

2. **Botany.**—Open to all students. Special attention will be given to a study of the morphology and distribution of marine and fresh-water Algae, and to the methods of collecting and preserving specimens. Arrangements will be made also for those desiring work on other forms, such as Fungi, Bryophyta, Ferns, and Spermaphyta. (Humphrey)

3. **Zoology.**—Open to students who have had course 1 in Zoology or Physiology, or an equivalent. The object of this course is primarily to enable students to gain a wide general

knowledge of marine forms, and to this end special attention will be devoted to collecting both along the shore at low tide and at the surface of the ocean. (PRICE)

4. **Structure of the Nervous System and Sense Organs of Marine Vertebrates.**—Open to all students who have had course I in Physiology or Zoology, or an equivalent. It will consist of two lectures per week and daily laboratory work. (STOLTENBERG)

5. **Vertebrate Zoology.**—Open to all. A general course in the classification of vertebrates, with studies in the habits and geographical distribution of species. Special attention will be given to the birds, mammals, reptiles, and tide-pool fishes which are found in the region. (SNYDER)

Students successfully completing any of the above courses will receive five units of university credit. Only one course can be taken during the session.

Laboratory Fee

The laboratory fee is twenty-five dollars.

LELAND STANFORD JUNIOR MUSEUM

HARRY C. PETERSON, Curator.

EDWIN ALONZO AUSTIN, Assistant Curator.

BUNKICHI SHIBATA, Museum Assistant.

EUGENE GARRISON McCANN, WILLIAM DAVID BURCHAM, Assistants.

In 1880, Leland Stanford, Junior, then eleven years of age, accompanied his parents on a trip through Europe. During this journey he purchased mementoes of the various places visited—at first merely with the object of having a collection to recall the pleasures of his European trip. Becoming ambitious to broaden this collection, archæological researches and acquisitions were begun, in 1883, on a second trip to Europe, with the idea of finally establishing a great museum. The Leland Stanford Junior Museum was designed by Mrs. Stanford as a memorial to perpetuate this idea, and the additions to the original collection are mainly her gift to the Museum.

The main building is of Grecian architecture, built of solid concrete, and absolutely fireproof. The cornerstone was laid May 14, 1891, and the museum opened to visitors in 1894. In 1899 and 1905 extensive additions to the original building were completed.

Through the courtesy of Wells, Fargo & Co., all gifts intended for the Museum will be transported free of charge over their lines, in shipments of fifty pounds or less, from railroad points in California, if addressed to the Curator, Leland Stanford Junior Museum, Stanford University, California.

(Owing to damage and disarrangement caused by the earthquake of April 18, 1906, the Museum is at present closed to the public, and the description of contents is omitted from this edition of the *Register.*)

CATALOGUE OF STUDENTS

NAME	RESIDENCE	MAJOR SUBJECT
Abbott, Alden Harold,	Campbell,	History
Abbott, Frank Howard,	San Francisco,	Law
Abright, Anne Pauline,	Palo Alto,	Latin
Abright, William Worden,	Palo Alto,	Civil Eng.
Acheson, Barbara Katharine.	Eureka,	Mathematics
Ackley, Forrest Marlin,	Glendale,	Drawing *Sp.*
Adams, Frederick Archibald,	Oakland,	Law
Adams, Morgan Orland,	Los Angeles,	Economics
Adams, Olga,	Los Angeles,	History
Adams, William Welsh,	San Diego,	Electrical Eng
Adkinson, Laura Ruth,	Chicago, Ill.,	French
Ainsworth, Howard Dearborn	Minneapolis, Minn.,	Geol & M.
Albrecht, Gertrude,	San Francisco,	Law
Alexander, John Nelson,	San Rafael,	Law
Allen, Ben Shannon,	Woodland,	History
Allen, Howard Frank,	Stockton,	History
Alvord, John Hartwell,	Ventura,	Law
Ambrose, Oliver Stephens,	Lockeford,	Elec. Eng.
Amick, Myrtle Elisabeth,	Oceanside,	History
Anderson, Cecil Melville,	Salinas,	Civil Eng
Anderson, George Anton,	Harrisburg, Ore.,	Elec. Eng
Anderson, Roscoe James,	Lincoln, Neb.,	History
Andrews, Elizabeth Melvina,	Corona,	Mathematics
Andrews, Frank Elmer,	Colton,	Civil Eng.
Angwin, Florence Schneider,	Palo Alto,	Botany
Aniya, Seishu,	San Francisco,	Economics
Anju, Shohachi,	Saga, Japan,	Economics
Ardzrooni, Leon,	Fresno,	English *Sp*
Arnott, John David,	Palo Alto,	Law
Arrell, Deil Bernie,	Oakland,	Geol. & Min.
Ashford, Stanley Haze Healam	Honolulu, H. T.,	Elec. Eng.
Atkinson, Evelyn,	Mountain View,	German
Atwood, Clarence Goodrich.	Monrovia,	Law
Avery, Lewis Gorton,	Los Angeles,	Economics

Aynesworth, George Levin,	Palo Alto,	Law *Sp.*
Bacon, Howard Little,	San Jose,	Law
Bailiff, Julia May,	Banning,	English
Baker, Emerson,	Forest Grove., Ore.,	History
Baker, Mary Caroline,	San Diego,	Physiology
Baker, Thomas Childrey,	San Diego,	Mech. Eng
Baker, Robert Henry,	Los Angeles,	Geol. & Min.
Baldwin, Earl Milton,	Red Oak, Ia.,	Elec. Eng.
Ball, Chester Alexander,	Woodland,	Law
Balsbaugh, Mary Alice,	Palo Alto,	Latin
Barbaree, Theophilus Horatio,	Milton, Ont.,	Mathematics
Barbour, Nathan Powell,	Lockeford,	Chemistry
Barbur, LeRoy Wright,	Los Angeles,	Geol. & Min.
Bardin, Hazel Jane,	Salinas,	English
Barkelew, Trimble,	Los Angeles,	Mech. Eng.
Barker, Earle Wright,	San Jose,	Mech. Eng.
Barkley, William Sherritt,	Los Angeles,	Law
Barlow, Edna Alice,	Los Angeles,	History
Barlow, Maybelle Bertha,	Los Angeles,	History
Barmore, David S.,	Los Angeles,	Law
Barnes, Katharine Whitney,	Oakland,	English
Barnhart, Della Carra,	Coyote,	English
Barrett, Richard Watts, **A. B., Stanford, 1904.**	San Francisco,	Law
Bartlett, Mabel Juanita,	Ventura,	German
Bartruff, Jeanette Eleanor,	Los Angeles,	Latin
Basu, Satis Chandra, **A. B., University of Calcutta, 1905.**	Bengal, India,	Chemistry
Bateman, William George,	Salt Lake City, Utah,	Chem.
Bates, Callie Hildred,	Lawrence,	German
Bates, Frank Thomas,	Rialto,	Law
Batkin, Paul Jay,	Riverside,	Law
Batterson, Sheldon Morse,	Pasadena,	Law
Bayley, J. Garfield,	San Jose,	Education
Beal, Charles Laurant,	Palo Alto,	English *Sp.*
Beard, Ethel Grace,	Modesto,	German
Beard, Grace Rachel,	Minneapolis, Minn.,	German
Beardsley, Charles Alexander, **A. B., Stanford, 1906.**	Campbell,	Law
Beattie, William Alfred,	Campbell,	Economics
Beckley, Reuben Elmer,	Ukiah,	Mech. Eng.
Beckwith, Henry Truman,	Providence, R. I.,	Geol. & Min.

Bee, Charles Everett,	Cupertino,	Civil Eng.
Beebee, Ralph Augustus,	Gridley,	Civil Eng
Beeger, Gertrude Margaret,	Redwood City,	German
Beeger, Lulu,	Redwood City,	German
Beeger, Pauline Marie,	Redwood City,	Physiology
Behlow, William Wallace,	Redlands,	German
Belieu, Vergil Ray,	Compton,	Law
Belknap, Dita,	San Francisco,	History
Bell, Herbert Philander,	Eureka,	Elec. Eng
Bell, John Henry,	Palo Alto,	Mining Eng
Bell, Rosa Edith,	Santa Rosa,	English
Bellah, Samuel Harrison,	Hanford,	Civil Eng.
Bellows, Virgil Franklin,	Cleveland, Ohio,	Drawing
Bennett, Lyman Hakes,	Virginia City, Mont.,	Law
Bennett, Thomas Tankerville,	Marshfield, Ore.,	Law
Benson, Carl Henry,	Redlands,	Mech. Eng.
Berger, Alice Ruth,	San Jose,	Chemistry
Bernard, Fred Horton,	Tucson, Ariz.,	Law
Berry, Florence Ridgway,	Los Angeles,	English
Berry, Harold R., LL. B., Yale University, 1901.	Los Angeles,	Psychology
Berry, Samuel Stillman,	Redlands,	Zoology
Best, Alice,	Palo Alto,	English
Bianchi, Adolphus Benjamin,	Cambria,	Law
Bias, Stanley Clayton,	San Francisco,	History *Sp.*
Bickel, Karl August,	Geneseo, Ill.,	History *Sp.*
Bille, Anna Matilda,	Palo Alto,	English
Bille, Mary Elizabeth,	Palo Alto,	Mathematics
Binder, Hazel Mignon,	Alameda,	English
Binkley, Ralph Putnam,	Hollister,	Economics
Binkley, Tholow,	Hollister,	Physiology
Binns, Clyde Arthur,	Sandusky, Ohio,	Geol. & Min.
Bishop, Beryl Boswell,	Palo Alto,	English
Bittner, Harvey Peter,	Albuquerque, N. M.,	German
Blake, Thomas Barnard,	Palo Alto,	History
Blodget, Hazelton Park,	Bakersfield,	Economics
Blodget, Percy Langdon,	Bakersfield,	Mech. Eng. *Sp.*
Blodget, Rush Maxwell,	Bakersfield,	Law *Sp.*
Blodget, Ruth,	Bakersfield,	History
Blood, Herbert Theodore,	Denver, Colo.,	History
Blood, Walter William,	Denver, Colo.,	Law
Blow, William Thomas,	Pacific Grove,	Civil Eng.

Boardman, Julia,	Palo Alto,	English
Bobo, Lonnie Adelbert,	Selma,	Elec. Eng
Bodley, Grace Majella,	San Jose,	History
Boezinger, Bruno,	Palo Alto,	German
A B., Ft. Worth University, 1893, A. M., 1896.		
Bohart, George Shambaugh,	Clinton, Iowa,	Chemistry
Bohnett, Lewis Dan,	Campbell,	Law
B. L., University of California, 1906.		
Bolin, John Seigfried,	San Jose,	Education
Bolton, Florence,	Stanford University,	German
Bonnell, Cornelia,	Palo Alto,	Physiology
Boobar, Elwood Campbell,	San Francisco,	Economics
Bootes, Bertha Burnham,	Berkeley,	English
Boothe, Genevieve,	Colton,	English
Borland, Robert Henry,	San Bernardino,	Law
Borough, Anne Elise,	Palo Alto,	Latin
Borough, Edwin Wallace,	Palo Alto,	Civil Eng.
Bothwell, Ina Grace,	Salt Lake City, Utah,	French
Bothwell, Zayda Edith,	Salt Lake City, Utah,	German
Botsford, Lucy Esther,	San Jose,	Education
Botts, Pauline Ballinger,	Los Angeles,	English
Boyd, DeEstraye Cassell,	San Jose,	Economics
Boyle, Harley Johnson,	Keller, Wash.,	Law
Boyle, John Clarence,	Escondido,	Law
Boyle, Lewis Vincell, Jr.	Escondido,	Law
Brackett, Ross Dudley,	Pasadena,	Elec. Eng.
Brackett, William Franklin,	Pasadena,	Mining Eng.
Bradford, Clarkson Beem,	Ottawa, Ill.,	Civil Eng.
Bradley, Clarence Linn,	Visalia,	Elec. Eng.
Bradley, Nathaniel Forsyth,	Visalia,	Law
A. B., Stanford, 1906.		
Bradley, Paul F.,	Ukiah,	Mech. Eng
Brady, Emmett James,	Columbia,	Physiology
Brainerd, Gertrude Gardner,	Los Angeles,	English
Branner, Elsie,	Stanford Univ.,	History
Branner, John Kennedy,	Stanford Univ.,	Geology
Brassy, Lucien Peter,	San Jose,	Mech. Eng.
Braun, Carl Franklin,	Cupertino,	Mech. Eng.
Brawley, Lee J.,	Seattle, Wash.,	Economics
A. B., Stanford, 1907.		
Breer, Carl,	Los Angeles,	Mech. Eng
Breton, Edith Lillian,	Morgan Hill,	Botany

Brewster, Charles Stockton,	Minneapolis, Minn.,	Economics
Brinton, Margaret,	San Diego,	Mathematics
Brinton, Walter Franklin,	Stanford Univ.,	Civil Eng.
Bristol, Charles O.,	Redwood City,	Civil Eng
Britton, Raymond Morris,	Lawrence,	History
Brohaska, Catherine Margaret,	San Jose,	English
Brooke, Banner Raymond,	Portland, Ore.,	German
Brooke, Robert Dunbar,	Spokane, Wash.,	Elec. Eng.
Brooks, Joseph James,	*Colusa,*	Civil Eng.
Brooks, Milton Jay,	Santa Rosa,	Elec. Eng.
Brower, Adna Treat, **A. B., Stanford, 1907.**	San Jose,	Elec. Eng
Brower, Irving King,	Bakersfield,	Law
Brown, Edna Lucile,	Rockford, Ill.,	German
Brown, Harold Ralph,	San Francisco,	Law
Brown, Roger Houssels,	Duarte,	Civil Eng.
Brown, Samuel Windsor,	San Jose,	Education
Browne, Mae,	Rhinelander, Wis.,	English
Bruning, Harry Fredrick,	Oakland,	Law
Brunton, Mary Cecelia,	Salt Lake City, Utah,	English
Bryan, Mary Katherine,	Anacostia, D. C.,	Botany
Bryan, Norris Pinkney,	Anacostia, D. C.,	Law
Bryan, Samuel,	Anacostia, D. C.,	Law
Bryant, Claribel,	Sioux City, Ia.,	German
Bryant, Percy Leon, **A. B., Trinity College, 1900.**	San Jose,	Chemistry
Bubb, John Boulware,	Mountain View,	Mech. Eng
Buchan, Dean Winslow,	Palo Alto,	Chem. Eng
Buckingham, Elizabeth Lee,	Palo Alto,	English
Buell, Henry H.,	Stockton,	Elec. Eng.
Bumgarner, Jesse Adams,	San Francisco,	Elec. Eng. *Sp.*
Bundy, Eudora Beaufort, **A. B., Stanford, 1907.**	Los Angeles,	Latin
Bundy, Sarah Elizabeth,	*Los Angeles,*	*English*
Burbank, Daniel Wellman,	Santa Cruz,	Law
Burbridge, Harry Carleton,	Manchester, Ia.,	Physics
Burcham, William David,	Palo Alto,	Geology
Burge, Hazel Delle,	Stockton,	Drawing
Burge, Noel S.,	Stockton,	Civil Eng.
Burgren, Arthur William,	San Francisco,	Geol. & Min
Burgunder, Robert Marcus,	Oakland,	Law
Burke, Charles Victor,	Palo Alto,	Zoology

Burke, Mabel Claire,	Palo Alto,	Zoology
Burke, William Edmund,	Palo Alto,	Chem. Eng. *Sp.*
Burkhalter, Frances Cleveland,	Los Angeles,	History
Burnham, Theda Abbot,	San Diego,	English
Burr, Myron Carlos,	Monrovia,	Civil Eng
Burrell, Florence Cotton,	Oakland,	Zoology
Burrell, Logan,	Portland, Ore.,	Geol. & Min
Burritt, Elizabeth Sophia,	Palo Alto,	Latin
Bursk, Herbert Lee,	Riverside,	English *Sp.*
Burtis, Prentis Townsend,	San Francisco,	Economics
Burtt, Payson Dodge,	Oakland,	Geol. & Min
Bush, George Barnard,	Riverside,	Law
Cadwalader, Theodore Roger,	Los Angeles,	Civil Eng.
Camp, William Roswell,	Palo Alto,	Economics
Campbell, Jesse Eugene,	Adin,	Law
A. B., Stanford, 1906.		
Campbell, William Archy,	Kendallville, Ind.,	Law
Canterbury, Harry Horton,	Redlands,	Mech. Eng.
Cantrell, Russell William,	San Francisco,	Law *Sp.*
Carpenter, John Emil,	Mountain View,	Elec. Eng.
Carpenter, Mark A.,	Ukiah,	Law
Carpenter, Nelson K.,	Escondido,	Civil Eng.
Carpy, Albert Charles,	San Francisco,	Economics
Carson, Marion Vroom,	Palo Alto,	English
Carson, Merwin Bishop,	Palo Alto,	Civil Eng.
Carter, Bonnie,	Fresno,	German
Carter, John Noble,	Cave City, Ky.,	Law
Carter, Royle Angelo,	Fresno,	Law *Sp.*
Cary, Edward Guilford,	Palo Alto,	Physiology *Sp.*
Case, Alexander Truman,	Corning,	Chem. Eng
Case, Rowena Belle,	No. Yakima, Wash.,	History
Cashbaugh, William Augustus,	Bishop,	Geol. & Min. *Sp.*
Cass, Phil,	Los Angeles,	Law
Caswell, Albert Edward,	San Jose,	Mathematics
Center, Inez,	Lawrence,	History
Chaffee, Burns Stoddard,	Garden Grove,	Physiology
Chalfant, Alice Jessie,	San Jose,	German
Chalmers, Alexander Jessiman,	Forest Grove. Or.,	Physiology
Chamberlin, Allen Mortimer,	San Jose,	Geol. & Min.
A. B., Stanford, 1907		
Chamberlin, Cora Eva,	Woodland,	English
Chandler, Clayton Isaac,	Selma,	Geol. & Min

Chandler, Robert Bowman,	Los Gatos,	Civil Eng
Chapman, Alice Louise,	Redlands,	French
Chapman, Geo. Frederick, Jr.,	San Francisco,	Economics *Sp.*
Chapman, John Frye,	Redlands,	Law
Charlebois, Emma Eulalie,	Ventura,	History
A. B., Stanford, 1907.		
Chase, Mildred Helen,	Tacoma, Wash.,	English
Cheda, Gilbert Ernest,	San Luis Obispo,	Geol. & Min.
Cheda, Henry Prosper,	San Luis Obispo,	Geol & Min.
Cheney, Everett Wethered,	Reno, Nev.,	Law
Choate, James Roy,	Los Angeles,	Law
A. B., Stanford, 1906.		
Christensen, Carlo Prestbye,	Kalispell, Mont.,	Elec. Eng.
Clark, Claudia L,	Redlands,	History
Clark, Edward James,	San Jose,	English
Clark, Eva Belle,	Fresno,	German
Clark, Howard Foster,	Redlands,	Civil Eng.
Clark, Lettie Marcelia,	San Jose,	History
Clark, Neil C.,	Prescott, Ariz.,	Law
Clark, Willis Arthur,	Greeley, Colo.,	Mech. Eng.
Clarke, Effie May,	Riverside,	English
Clarke, Julian Fairfield,	Stanford Univ.,	Law
Clements, Paul Henry,	Indianapolis, Ind.,	Law *Sp.*
Click, Roy Broughton,	Porterville,	Geol & Min.
Clift, Denison Halley,	San Francisco,	History
Clithero, Jennie Ethel,	Boise, Idaho,	German
Close, John Manley,	San Francisco,	Law *Sp.*
Clowe, Charles Edward,	Woodland,	Geol. & Min.
Coburn, Albert Charles,	Stanford Univ.,	History *Sp.*
Cochran, Lex Hugh,	San Bernardino,	Mech. Eng.
Coe, Arthur Frederic,	Los Angeles,	Law
Coe, George Clifford,	Portland, Ore.,	Physiology
Coffman, Henry Willson,	Healdsburg,	Mining Eng.
Cogswell, Jessie Flavia,	Riverside,	Latin
Cole, Amos Newton,	Dubois, Pa.,	Chemistry
Cole, Ernest Delevan,	Santa Ana,	Civil Eng.
Cole, Jeannette Marguerite,	Pasadena,	English
Cole, John Lewis,	Los Angeles,	Civil Eng.
Cole, Waldo Carnahan,	Palo Alto,	Elec. Eng.
Colgate, Albert Benjamin,	Canon City, Colo.,	English
Collette, Perry Edmund,	Cobleskill, N. Y.,	Chemistry
Collier. Alice Honeyman,	Portland, Ore.,	Greek

Colwell, Maynard R.,	Eureka,	Elec. Eng.
Conant, Rexford Hitchings,	Eureka,	Elec. Eng.
Cone, Elizabeth Hiett, A. B Stanford, 1901.	Palo Alto,	English
Conrad, Warren Cross, Jr.,	Los Angeles,	Law
Conway, Daniel Francis,	Emmetsburg, Ia.,	Law *Sp.*
Conwell, Walter Lichtenthaeler	Reading, Pa.,	Civil Eng.
Cook, Archibald Beethoven,	Santa Barbara,	Civil Eng.
Cook, Jessie Loring, A. B., Stanford, 1902.	San Jose,	History
Cook, Newton Dana,	Santa Barbara,	Mech. Eng.
Cooke, Hazel Anna,	San Francisco,	German
Cooley, William Merle,	Kalispell, Mont.,	Elec. Eng.
Coolidge, Ernest Lynn,	Palo Alto,	Civil Eng.
Coolidge, Grace B.,	Palo Alto,	Latin
Coonan, Clarence,	Eureka,	Law
Coonradt, Arthur Chapin,	Picacho,	Mech. Eng.
Cooper, Alice Cecilia, A. B., Stanford, 1907.	Los Angeles,	English
Cope, Elmo Clifton,	San Francisco,	Geol. & Min.
Corl, Edwin Jennings,	Fairmont,	Chemistry
Costar, Garrison,	Chico,	Civil Eng.
Cottle, Everett Royal,	San Jose,	Elec. Eng.
Cotton, Claudine,	San Francisco,	History
Couch, Mary Juanita,	Vacaville,	Botany
Council, David Pendleton,	San Francisco,	Law
Cox, Albert Brooks,	Joplin, Mo.,	Elec. Eng.
Cox, Anna Shipley,	San Jose,	Latin
Cox, George Norris,	Hollister,	Law
Cox, Katherine,	Santa Clara,	History
Cox, Mabel Lucille,	San Bernardino,	History
Cozzens, Howard Francis,	San Jose,	Civil Eng.
Craig, Nina Grace,	Honolulu, H. T.,	English
Cram, Willard Glidden,	Fresno,	Law
Cramer, Harry Putnam,	Portland, Ore.,	Elec. Eng
Crandall, Berton Woodford, A. B., Stanford, 1907.	Palo Alto,	Chemistry
Crandall, Esther, A. B., Stanford, 1903; A. M., 1905.	Palo Alto,	Psychology
Crandall, Roderic, A. B., Stanford, 1906.	Palo Alto,	Geol. & Min
Crandell, Ethel May,	Redlands,	Latin
Crane, William Frank,	Fallbrook,	Mech. Eng.

Craven, Leslie,	Bellingham, Wash.,	Law
Crawford, Antoinette,	San Francisco,	English
Crawford, David Paul,	Cupertino,	Geol. & Min.
Crawford, Fred William,	San Jose,	Law
Crawford, Wendell Levi,	Cupertino,	Elec. Eng. *Sp.*
Crider, Clay Russell,	San Jose,	Law
Crider, Willis Clyde,	Maitland, Mo.,	English *Sp.*
Crittenden, Franklin Avery,	Cupertino,	Law
Croghan, Margaret Anna,	Eureka,	Latin
Croop, Arthur M.,	San Jose,	Education
Crosier, Mildred Irene,	Santa Ana,	English
Cross, Donella Mary,	Fresno,	Latin
Cross, Ira B.,	Madison, Wis.,	Economics
A. B., University of Wisconsin, 1905; A. M., 1906.		
Cross, Mildred Elizabeth,	Hanford,	History
Cross, Robert John,	Fresno,	Chemistry
Crowder, Clifford Lee,	Chico,	Law
B. L., University of California, 1905.		
Crowley, William Lucas,	Pasadena,	Chemistry
Crumby, Elizabeth Julia,	Redlands,	History
Cruzan, Harold Ide,	San Francisco,	Law
A. B., Stanford, 1906.		
Cuenin, Emile Francis,	San Francisco,	Economics
Culver, Clifton Francis,	Stanford Univ.,	Law *Sp.*
Culver, Kathryn Lee,	Oakland,	English
Cummins, Russell Woodworth,	Covelo,	Civil Eng.
Cunha, Edward Anthony,	Milpitas,	Law
Cunningham, Athan David,	Anderson,	Mathematics *Sp.*
Cunningham, May Alice,	Sacramento,	French
Curry, Bessie Alberta,	San Jose,	Physiology
Curtin, Francis Andrew,	Elmira, N. Y.,	Law
Cushing, John Eldridge,	San Rafael,	Law
Cuthbertson, Alexander M.,	Manchester,	Chemistry
Cuthbertson, Alice Bertha,	Palo Alto,	German
Cutting, James Arthur,	Palo Alto,	Physiology
A. B., Stanford, 1905.		
Daily, Harry Parker,	Ft. Smith, Ark.,	Law
Dalton, William Dorsey,	Austin, Nev.,	Chemistry
Damerel, Bright Spencer,	Ocean Park,	History
Danneberg, Edna Martha,	Santa Clara,	German
Danziger, Claude Raymond,	Tacoma, Wash.,	Geol. & Min
Das, Khagendra Chandra,	Calcutta, India,	Chemistry

Daugherty, Robert Long,	Redondo,	Mech. Eng.
Davenport, Nina Claire, **A. B., Stanford, 1907.**	San Jose,	Drawing
David, Marguerite,	Hamilton, Mont.,	English
Davidson, William Mark,	Porterville,	Entomology
Davies, William Evan,	Livermore,	Law *Sp.*
Davis, Dwight M.,	Kansas City, Mo.,	Law
Davis, Edna Grayce,	Palo Alto,	English
Davis, E. May,	Crockett,	French
Davis, George William,	Willits,	Civil Eng.
Davis, Grace Maple,	Redwood City,	History
Davis, Paul McDonnell,	Banning,	Mech. Eng.
Davis, Warren A.,	Crockett,	Elec. Eng.
Dean, Arthur Forrest,	Corona,	Chemistry
DeBolt, Thurman Alden,	Los Angeles,	Law
Delano, Preston Brady,	Palo Alto,	Law
Dennis, Horton Thompson,	Tacoma, Wash.,	Geol. & Min.
Derby, Julia,	Los Angeles,	German
Derby, William Flagg,	Alameda,	Zoology
Devendorf, Ada,	Los Angeles,	Botany
Dickover, Eva Eleanor,	Santa Barbara,	Drawing
Dillon, Isaac,	San Francisco,	Physiology
Dillon, James deKoven,	Los Angeles,	Geol. & Min.
Dillon, James Root,	San Francisco,	Physiology
Dillon, Josephine,	Los Angeles,	French
Doan, Norman Eugene,	Sacramento,	Law
Doane, Rennie Wilbur, **A. B., Stanford, 1896.**	Palo Alto,	Entomology
Dodd, Harold Valby,	Los Angeles,	Geol. & Min.
Dodds, Orvis Paul,	Mayfield,	Civil Eng. *Sp.*
Doe, Alvah Bartlett,	San Francisco,	Law
Doig, Arthur Haldane,	San Diego,	Physiology
Dole, Sanford Ballard,	Riverside,	Mech. Eng.
Donley, James George, Jr.,	Auburn, N. Y.,	English
Dooner, Clara,	Los Angeles,	Drawing
Dorn, Grace Beatrice,	Corning,	English
Dorr, Frederick William,	San Francisco,	Law
Dotten, John Knowles,	Riverside,	Economics
Douglass, Charles York,	Stanford Univ.,	Chemistry
Downing, Samuel Robert,	Arcata,	Physiology
Drew, Arthur Homer,	Fresno,	Law
DuBois, Luther E.,	Carthage, Ind.,	Law

DuBois, Marion Ethel,	Alameda,	History
Dudley, Ernest Griswold,	Stanford Univ.,	Syst. Botany
Dudley, Laura Eliot,	Guilford, Ct.,	Latin
Duff, Emerson L.,	Los Angeles,	Law
Duff, Isabel Mary,	Menlo Park,	Latin
Duffus, Robert Luther,	Waterbury, Vt.,	English
Duffus, William McGlashan,	Palo Alto,	History
DuFlon, Thaddeus Avery,	Plainfield, N. J.,	English
Dunbar, Everett St. John,	Palo Alto,	Civil Eng.
Duncan, Ethel Canfield.	Indianapolis, Ind.,	English
Duncan, Louise.	Porterville,	English
A. B., Stanford, 1907.		
Dunn, May Alice,	Monrovia,	History
Dunne, James Leonard.	Palo Alto,	Civil Eng.
Durand, Wm. Leavenworth,	Stanford Univ.,	Elec. Eng.
Durst, Ethel Helena,	Sunnyvale,	Mathematics
Dyer, Edwin Francis,	Palo Alto,	History
A. B., Indiana University, 1891 ; LL. B., 1892.		
Dykes, Eldredge Bachman,	Mayfield,	Education
Earle, Edna,	Los Angeles,	History
Eastham, Wallis Fearnside,	Vancouver, Wash.,	Law
Eaton, Louis Reginald,	San Francisco,	Law
Eby, Benton A.,	Howard, Kans.,	English
Eckstein, Pearle Marie,	Norwalk,	English
Edmonston, Arthur Donald,	Ferndale,	Civil Eng
Edwards, LeRoy Mallory,	Palo Alto,	Law
Edwards, Mary Constance,	San Jose,	History
Edwards, Paul Carroll,	Indianapolis, Ind.,	English
Edwards, William Watkin,	San Jose,	Civil Eng.
Ehrhorn, Adolph Edward,	San Francisco,	Elec. Eng.
Ehrnbeck, Anna Julia,	Los Angeles,	German
Ellerbeck, Aurania,	Ocean Park,	English
Elliot, Walter, Jr.,	Santa Maria,	Civil Eng.
Elliott, Ada,	Orange,	German
Elliott, Charlotte,	Del Rapids, S. D.,	Zoology
Ellis, John Franklin,	Ogden, Utah.	Chemistry
Elwell, Cyril Frank,	Los Angeles,	Elec. Eng.
Elwood, Roby Theresa,	Alhambra,	German
Endres, Anthony,	Los Angeles,	Elec. Eng
Engle, Alfred J.,	Palo Alto,	Law
Farnsworth, Lillian McLaine,	Visalia,	English
Farnsworth, Louis Dugett,	Salt Lake City, Utah,	El. Eng.

Farrow, Edwin Dunbar, Jr.,	Visalia,	Civil Eng
Faulkner, George Chester,	San Luis Obispo,	Chem. Eng
Fay, Eli Perrin,	Los Angeles,	Economics
Fay, Lovinia Louise,	San Diego,	German
Fay, William Stiles,	San Diego,	Civil Eng.
Faymonville, Philip Ries,	San Francisco,	Law
Fenton, Kenneth Lucas,	Portland, Ore.,	Law
Ferguson, Carl Augustus,	Colton,	Elec. Eng.
Ferguson, Roy Noble,	Colton,	Mining Eng
Fergusson, James Grant,	Stanford Univ.,	Latin
Ferrell, Gilbert Dane,	Creal Springs, Ill.,	Law
Ferry, Douglass Hewitt,	San Diego,	Civil Eng.
Field, Allen Wescott,	Lincoln, Nebr.,	Law
Field, Bernice,	San Jose,	German
Field, Lois Edith,	Redlands,	Greek
Fields, Catherine Leota, A. B., Stanford, 1903.	Ventura,	English
Figg-Hoblyn, Thomas R. W. F.	Santa Barbara,	Physiology
Finlay, Lester Welling,	Los Angeles,	Civil Eng. *Sp.*
Fisher, Frank Alma,	Salt Lake City, Utah,	Law
Fisher, Marshall Weston,	Mayfield,	Law
Fitch, Harold,	San Francisco,	Law
Fitting, Harold Hansen,	San Bernardino,	Civil Eng
Fitting, John Waldemar,	San Bernardino,	Civil Eng.
Flaus, Italia Evans,	Palo Alto,	English
Fleisher, Lillian Gertrude. B. L., University of California, 1904.	Santa Maria,	Rom. Lang
Fleming, Grace Elinor,	San Jose,	English
Fleming, Louise Kate, A. B., Stanford, 1906.	San Jose,	English
Fletcher, Arthur Ransford, A. B., Stanford, 1906.	Palo Alto,	English
Fletcher, Ethel Louise,	Berkeley,	History
Flickinger, Helen,	Council Bluffs, Ia.,	Zoology
Flickinger, Margaret,	Council Bluffs, Ia.,	German
Flintjer, Ross,	Redding,	Elec. Eng.
Flippen, Lucien Calvin,	Orange,	Physiology
Fobes, Katherine F.,	Loomis,	English
Foote, Robert Parke,	Evanston, Wyo.,	Elec. Eng.
Forbes, Florence Hazel,	Palo Alto,	English
Ford, Nellie Elizabeth,	Los Gatos,	Physiology
Ford, William Kirk,	Ukiah,	Law

Forncrook, Clarence Samuel,	Los Angeles,	Greek
Forsyth, Thomas Walter,	San Francisco,	Law
Fosdick, Bertha May,	Palo Alto,	Mathematics *Sp.*
Foshay, Eleanor Anna,	Los Angeles,	Zoology
Foss, James Calvin, Jr.,	Palo Alto,	Civil Eng.
Foster, Lora Ruth,	Saratoga,	Geology
Foster, Maude Adelaide,	Stanford Univ.,	German
Fowler, Alice Belle,	Paso Robles,	English
Fowler, Richard,	San Jose,	Elec. Eng.
Foy, Florence,	Los Angeles,	Economics
Frank, Lester Letivitch,	San Francisco,	Economics
Franklin, May,	Palo Alto,	French
Fraser, James Herbert,	San Jose,	Chemistry
Frazee, Laura Antoinette,	Stanford Univ.,	Psychology
Frazee, Youle T.,	Montclair, N. J.,	Mech. Eng.
French, Beatrice Rebecca, A. B., Stanford, 1905.	San Jose,	Education
French, Davida Catherine,	Stanford Univ.,	History
French, Henry Nelson,	San Jose,	Law
French, Jessie Lilla,	Pasadena,	English
Fries, Frank Hecht,	Oakland,	Economics
Frizzell, Porter Taylor, A. B., Stanford, 1907.	Mitchell, Ore.,	Chemistry
Frolli, Albert William,	Salinas,	Geol. & Min.
Fullaway, David Timmins,	Palo Alto,	Entomology *Sp.*
Fuller, Edith Fairfield,	Palo Alto,	German
Fuller, Raymond August, A. B., Stanford, 1907.	Palo Alto,	Geol. & Min.
Fuller, William Parmer,	San Mateo,	Law
Gabel, Alice Hermine,	Palo Alto,	German
Gage, Stephen Norris,	Oakland,	Economics
Galbraith, William James, Jr., A. B, Stanford, 1907.	Cananea, Mexico,	Law
Gale, Helen Avery,	Palo Alto,	History
Gallois, John Eugene,	San Francisco,	Economics
Gamble, Elizabeth Frances,	Palo Alto,	English
Gammon, Castle,	Lodi,	English
Gammon, Dell Duane,	Lodi,	Mech. Eng
Gandolfo, Florence Catherine,	Ventura,	German
Ganong, Carl F.,	Oregon City, Ore.,	Mech. Eng.
Gardner, Di Margaret,	Orange,	Law
Gardner, Dian Rathbun,	Orange,	Law

Gardner, Henri Reginald,	Orange,	Civil Eng
Gardner, Walter Hervey,	Oroville,	Chemistry
Garfias, Valentine Richard,	Mexico City, Mex.,	Civil Eng.
Garnett, Benjamin J.,	Spokane, Wash.,	Civil Eng
Gartzmann, Pauline,	Long Beach,	English
Gavagan, Beatrice Antoinette,	Los Angeles,	English
Gay, Leslie Rowell,	Redlands,	Geol. & Min.
Gebb, William Stanley,	Jerome, Ariz.,	Chemistry
Geer, Charles Lester,	Campbell,	English
George, Florence Ethel,	San Diego,	English
George, Harrison Paul,	San Diego,	Civil Eng.
George, Harry Frederick,	Astoria, Ore.,	Economics
George, Leslie Nash,	Rialto,	Economics
George, Melvin Frederick,	Los Angeles,	Economics
George, Ruth,	San Diego,	German
Gerard, Bess,	Long Beach,	English
Gerard, Ruth,	Long Beach,	English
Gerber, Rudolph Henry Wm.,	San Francisco,	Chemistry *Sp.*
Gerlach, Percy Adelbert,	Los Gatos,	Physiology *Sp.*
Gibson, Edward Gilbert,	Indianapolis, Ind.,	Civil Eng
Gibson, Flora Edna,	Templeton,	Latin
Gibson, Irving Deane,	San Francisco,	Law
Gibson, James A.,	Los Angeles,	Law
Gibson, Thomas Masson,	Crystal Springs, Wash.,	Draw.
Giesy, Paul Church,	Portland, Ore.	Economics
Gilbert, Georgina Walker,	Chicago, Ill.	English
Gilbert, Grace McMillan,	Santa Barbara,	History
Gilbert, Ruth Hughes, **B. A., Stanford, 1907.**	Stanford Univ.,	History
Gilbert, Winifred Hughes,	Stanford Univ.,	History
Gillett, Effie May,	Eureka,	English
Gillmore, Elizabeth May,	Santa Barbara,	History
Gillmore, Jessie,	San Diego,	Physiology
Gilman, Arthur Francis,	Banning,	Chemistry
Gilman, Harold Arthur,	Redlands,	Law
Gilmore, Sadie Lois,	San Jose,	Mathematics
Gleason, Nellie Antoinette,	Riverside,	English
Glendenning, Roy-James,	Santa Clara,	Law
Goodell, Gorham Lane,	Portland Ore.,	Civil Eng.
Goodell, James McLain,	Palo Alto,	Mech. Eng. *Sp.*
Goodrich, Roy Roberts,	San Luis Obispo,	English

Goodspeed, Lillian Mildred,	Palo Alto,	Latin
Goold, Herbert S.,	San Francisco,	Economics
Gore, John Franklin,	Redlands,	Entomology
Goshorn, Joseph Ford,	Kalispell, Mont.,	Elec. Eng.
Gossett, Joseph Orland,	Palo Alto,	Mathematics
Gott, Raymond Arthur,	Alameda,	Law
Goudy, Franklin Burris, A. B., Stanford, 1907.	Denver, Colo.,	Geol. & Min'g.
Gould, Gladys,	Oakland,	History
Gowan, Arthur Jewell,	Los Angeles,	Elec. Eng.
Grau, Miriam Stedman,	San Francisco,	Physiology
Grau, Otto Karl, A. B., Stanford, 1907.	Sacramento,	History
Graves, La Vergne Gardner,	Los Gatos,	Elec. Eng.
Graves, Norine Maureen,	Los Angeles,	Greek
Gray, Mabel Sabrina,	Albany, N. Y.,	German
Green, Allan Lee,	San Mateo,	Mech. Eng.
Green, Charles Arthur,	San Mateo,	Law
Green, Edward Anthony,	Mountain View,	Physiology
Green, Harry Carlton,	Wheatland, Ind..,	Economics
Green, Helen,	Stanford Univ.,	English
Green, Isaac Leander,	Preston,	Law
Green, Kenneth Milton,	San Mateo,	Economics
Greenwood, Harlow Verne,	San Francisco,	Education
Greer, Dane Manson, A. B., Stanford, 1905, Engineer, 1907.	Stanford University,	Chemistry
Gregg, Beryl La Grande,	Palo Alto,	Law
Gregg, Clarence Matthew,	Redlands,	Economics
Griffin, Mabel Jeanette,	Palo Alto,	German
Griffith, Thomas Brotherton,	Wichita, Kans.,	Economics
Grinnell, Fordyce, Jr.,	Pasadena,	Entomology
Grove, Albertina Harriet,	Palo Alto,	Drawing
Gruwell, Lewis Earl,	Lakeport,	Law
Gude, Julie Augusta,	Los Angeles,	English
deHaas, Jacob Anton,	The Hague, Holland,	German
Hadden, Georgina Evelyn,	Palo Alto,	Zoology
Hadley, Earl Jonathan,	Bellingham, Wash.,	English
Hadley, Howard Irving,	Santa Barbara,	Law
Hadley, Mildred Monroe,	Whittier,	German
Hails, Charles Hamilton,	Santa Barbara,	Economics
Halcombe, Norman Marshall,	San Francisco,	Elec. Eng. *Sp.*
Hale, Frederic Albert, Jr.,	Salt Lake City, Utah,	Geol

Haley, Percis Coons,	Palo Alto,	Education *Sp.*
Hall, Byron Macaulay,	Fremont, Nebr.,	Law *Sp.*
Hall, Ethel Blanche, A. B., Stanford, 1907.	Sacramento,	French
Hall, Katherine M. H.,	San Jose,	Education
Haller, George Francis,	San Francisco,	Elec. Eng.
Halliday, Thomas Woodruff,	Spokane, Wash.,	Geol. & Min.
Halloran, Edwin Francis,	San Diego,	Geol. & Min
Halloran, Lewis Fred,	San Francisco,	Mech. Eng.
Halsey, Gerald C.,	Woodside,	Law
Halsey, Mildred,	Redwood City,	German
Halsey, Stella Duffield,	Honolulu, H. T.,	Syst. Botany
Hamilton, Archibald McDougal,	Polo, Ill.,	Law
Hammerly, Fred V.,	Oakland,	Geol. & Min
Hammond, Karoline Silliman,	San Diego,	Latin
Hammond, May,	Visalia,	English
Hammond, William Hays,	Visalia,	Law
Hampton, Chilton,	Palo Alto,	Psychology
Hanna, Cornelia Alberta,	Redlands,	English
Hansen, Edna Marie,	San Mateo,	Latin
Hanson, Millicent Ernestine,	Berkeley,	Drawing
Happy, Cyrus Prickett,	Spokane, Wash.,	Law
Harbaugh, Ross Wallace,	Palo Alto,	Chemistry
Hardy, Georgie Saunders,	San Diego,	Drawing
Harris, Margaret Eleanor,	Tonopah, Nev.,	English
Harris, Miriam Alice,	Santa Clara,	History
Harris, Raymond Callee,	Sacramento,	English
Harrison, Hurst Perbasco,	Palo Alto,	Law
Harrison, William Henry,	Cumberland, B. C.,	Elec. Eng.
Hart, James Vivian,	Sacramento,	Law
Hart, Lowell Jay,	Palo Alto,	Geol. & Min.
Hartzell, Philip Nicola,	Palo Alto,	Chemistry
Haskell, Edward Eben,	Pasadena,	Civil Eng.
Haskett, Don Stanley,	Pasadena,	Economics
Hastings, Russell Platt,	Soncy, Bermuda Is.,	Civil Eng.
Havenner, Franck Roberts,	Baltimore, Md.,	Economics
Haver, Harold McCuller,	Redlands,	Elec. Eng.
Hayden, Edith,	Fresno,	German
Hayden, Mary Calvert,	Tempe, Ariz.,	English
Hayes, Harriet,	Palo Alto,	English
Hayes, Pauline Elizabeth,	Alameda,	Drawing
Haynes, Walter,	Palo Alto,	Elec. Eng. *Sp.*

Hayslip, Eva Lois,	Sunnyvale,	English
Hayward, Edna,	San Carlos,	German
Hazeltine, Katherine Sherman,	San Jose,	English
Hazen, Coralyn,	Modesto,	German
Heald, Oscar Leslie,	Palo Alto,	Mech. Eng.
Heche, Arthur,	Niles,	Education
Hedum, Marie Otillie,	Wallace, Idaho,	Latin
Heffron, Harold J.,	Los Angeles,	Civil Eng.
Heinly, Donald George,	Los Angeles,	Law
Heller, Olive May,	Dutch Flat,	English
Hellman, Joseph Anthony Hoge,	Redwood City,	Law
Helsley, Edward Judson,	Ceres,	History
Hemphill, John Parks,	San Jose,	Economics
Henderson, Charles William,	Portland, Ore.,	Geol. & Min.
Hendry, George Whiting,	Detroit, Mich.,	Geol. & Min.
Henking, Frances Corinne,	San Diego,	German
Henley, Lloyd A.,	Palo Alto,	Elec. Eng
Henry, Edith Neil,	Santa Monica,	History
Henry, Jean,	Monterey,	Geology
Henry, Joe Edson,	San Jose,	Economics
Henry, Thomas Cecil,	Los Angeles,	Economics
Herbert, Elmer Harlan,	San Jose,	Mech. Eng.
Herold, Stanley Carrollton,	San Jose,	Geol. & Min
Herrmann, Frank Adolph,	San Jose,	Civil Eng. *Sp.*
Herron, Frederic William,	Napa,	Civil Eng.
Herron, Josephine E.,	Elsinore,	Drawing
A. B., Stanford, 1907.		
Herron, William Fraser,	Palo Alto,	Law
Hess, John Strider,	Baltimore, Md.,	Civil Eng
Hettman, Frederick Jacob,	Mayfield,	Elec. Eng.
Hettman, Walter Emil,	Mayfield,	Law
Hicks, William Wesley,	San Francisco,	Elec. Eng. *Sp.*
Higgins, Winifred,	Astoria, Ore.,	History
Higley, Rose Miriam,	Pasadena,	Zoology
A. B., Stanford, 1907.		
Higley, Wynter Blain,	Pasadena,	Geol. & Min
Hihn, Eulice William,	San Francisco,	Mech. Eng.
Hill, Elizabeth,	Tacoma, Wash.,	History
Hill, Ella Naomi,	Redlands,	History
Hill, Frank Lloyd,	Palo Alto,	Law
Hill, Henrie Granville,	San Jose,	Law
Hill, John James,	Riverside,	Law

Hill, Mary Guyer,	Peoria, Ill.,	English
Hill, Walter Hamilton,	Peoria, Ill.,	Chemistry
Hiller, Rachel Rose, A. B., Stanford, 1906	Springfield, Ill.,	Latin
Hind, Robert Renton,	San Francisco,	Mech. Eng
Hine, Harry Adams,	Eureka,	Civil Eng.
Hine, Thomas Buck,	Eureka,	Chem. Eng.
Hislop, Elizabeth,	Chicago, Ill.,	English
Hoag, Bessie Bell,	Palo Alto,	Latin
Hoagland, Dennis Robert,	Denver, Colo.,	Chemistry
Hodgdon, Emma Florette,	Sacramento,	French
Hodge, Raymond Earl,	Rialto,	Law
Hofer, Robert McKinnie,	Salem, Ore.,	Law *Sp.*
Hoff, Eva,	San Diego,	German
Hohl, Arthur Edwin,	Berkeley,	Geol. & Min
Holbrook, Lettie DeVoe,	Portland, Ore.,	English
Holcomb, Eliot,	Portland, Ore.,	Law
Holcomb, Fred Leroy,	Banning,	Drawing
Holcomb, Harry Gordon,	Banning,	Civil Eng.
Holly, Jesse Blaine,	Dixon,	Civil Eng.
Holman, John Raymond,	Portland, Ore.,	Elec. Eng.
Holman, Mary Persis,	Palo Alto,	Education
Holman, Richard Morris,	Palo Alto,	Botany
Hook, Joseph Stanley,	Perris,	Geol. & Min.
Hoover, Bessie Belle,	Palo Alto,	English
Hoover, Grace Amelia, A. B., Stanford. 1906.	Palo Alto,	Drawing
Hopkins, Prince Charles, Ph. B., Yale University, 1906.	Santa Barbara,	Mech. Eng.
Hopkins, Ralph Allen,	Pasadena,	Elec. Eng
Hopper, Shirley Marie,	Fresno,	German
Hori, Ayao,	Vallejo,	Elec. Eng.
Horn, Pearl Myrtle,	Oakland,	Mathematics
Hornby, Ralph Walter,	Burbank,	Mech. Eng.
Hornby, Raymond,	Redlands,	Chemistry
Horowitz, Elmor Eugene, A. B., Stanford, 1907.	San Bernardino,	Chemistry
Horton, Harry Leonard,	Ukiah,	Civil Eng
Hosford, Ada,	Menomonie, Wis.,	Latin
Hoskins, Lindel Margaret,	Palo Alto,	German
Hoskinson, Carl McKee,	Sacramento,	Elec. Eng.

Hough, Horace Carle,	Red Oak, Ia.,	Elec. Eng.
Houghland, Janet Berry,	Palo Alto,	History
Houghton, Glenn Brooks,	Hedrick, Ia.,	Law
Houser, John David,	Sacramento,	English
Howard, Ross D.,	San Francisco,	Mech. Eng.
B. S., Colorado State Agri. Coll., 1901; A. B., Stanford, 1907.		
Howell, Lucy Elizabeth,	Los Angeles,	Greek
Howell, Maude Teresa,	Los Angeles,	History
Hoxsie, George Gordon,	Portland, Ore.,	Chemistry
Hudson, Charles Lauran,	San Jose,	Civil Eng.
Hudson, Robert Allan,	San Jose,	Mech. Eng.
A. B., Stanford, 1907.		
Hudson, Robert Henry,	Watsonville,	Law
Huffman, Mercedes,	San Francisco,	History
Huggins, Harold Clarkson,	Portland, Ore.,	Chemistry
Hughes, Arthur Dickinson,	San Francisco,	Geol. & Min.
Hughes, Jennie Sherwood,	Crockett,	Drawing
Hughes, Ralph Leon,	Salinas,	Civil Eng.
Hughson, Beth,	Sacramento,	Greek
Hull, Delia Mae,	Palo Alto,	Latin
Humphrey, Harry Baker,	Palo Alto,	Botany
B. S., University of Minnesota, 1899.		
Hunter, Edward Ray,	Grand Junction, Colo,	Phys.
Hunter, Hubert Samuel,	Phoenix, Ariz.,	Latin
Hunter, Sue Marshall,	Los Angeles,	History
Huntsberger, Adele Clara,	Los Angeles,	History
Huntsberger, Maud Ethel,	Los Angeles,	Latin
Huntsberger, Ralph Francis,	Los Angeles,	History
Hurd, Katherine,	Palo Alto,	German
Hussey, George Donald,	Los Angeles,	Economics
Huston, Jay Calvin,	Buffalo, N. Y.,	Law
Hutchins, Alice Agnes,	Palo Alto,	History
Hutchins, Mary Emeline,	Palo Alto,	History
Hutchinson, Harry Turner,	Huron, S. D.,	Law
Hutchinson, Joseph Kellogg,	Palo Alto,	Law
Hutton, Alfaratta B.,	Campbell,	Drawing
Hyatt, Edward, Jr.,	Sacramento,	Mech. Eng.
Hyatt, Marguerite,	Sacramento,	Zoology
Hyatt, Shirley,	Sacramento,	Physics
A. B. Stanford, 1906.		
Hyde-Smith, J. Bayard.	San Francisco,	Economics

Ichihashi, Yamato,	Stanford Univ.,	Economics
Inahara, Katsuji,	Tokyo, Japan,	Economics
Ingels, Effie Merle,	Fresno,	Botany
Jackson, Edward Royle, A. B., Stanford, 1906	Redding,	Law
Jackson, Frank Kennedy,	Alameda,	Law
Jackson, Hartley Everett,	Palo Alto,	Mech. Eng.
James, Grace Louise,	Santa Monica,	History
James, Myrtle Hodge,	Santa Monica,	German
Jameson, Eloise,	Corona,	Chemistry
Jameson, Joy Gilbert,	Corona,	Min. Eng.
Jameson, Thomas Marion,	Calpella,	History
Jaqueth, Glen Scott,	Kalispell, Mont.	Elec. Eng.
Jarman, Edith Louise,	San Fernando,	History
Jeffreys, Anna Ernestine,	Princeton,	Drawing
Jenkins, Alice Mabel,	Stanford Univ.,	Physiology
Jenkins, Hubert Oliver,	Stanford Univ.,	Zoology
Jennison, Marjorie,	Fitchburg, Mass.,	History
Jens, Anna Margaret,	Belmont,	German
Joel, Arthur,	San Francisco,	Law
Johnson, Albert Lawrence,	San Francisco,	Law
Johnson, Clark Cyrus,	Los Angeles,	Civil Eng.
Johnson, Emily B.,	Los Angeles,	History
Johnson, James Rowland,	San Jose,	Elec. Eng.
Johnson, Johanne T.,	San Jose,	Physiology
Johnson, Newton Alexander, Jr.,	Easton,	Law
Johnson, Philip Royal,	Los Angeles,	Economics
Johnson, Sheldon Krag,	Palo Alto,	Economics
Johnson, William Samuel,	Stanford Univ.,	Elec. Eng. *Sp.*
Johnston, Hazel May,	Santa Clara,	History
Johnston, Ila Lee,	Santa Clara,	French
Johnston, Robert Morris,	Butte, Mont.,	Elec. Eng.
Jones, Charles Arch,	Stockton,	Civil Eng.
Jones, Gilbert Russell,	Suisun,	Mech. Eng.
Jones, Kenneth Inskip,	Suisun,	Law
Jones, Robert Alton,	Burlington, Vt.,	Chemistry
Jordan, Harold Bowen, A. B., Stanford, 1906	Stanford Univ.,	Chemistry
Jordan, Knight Starr,	Stanford Univ.,	Geol. & Min
Jorgensen, Henry Garfield,	Los Gatos,	Law
Josselyn, Arthur Talbert,	San Diego,	Botany

Jourdin, Willis Wallace,	San Antonio, Tex.,	Mch. E. *Sp.*
Katakura, Tojiro,	Stanford Univ.,	Economics *Sp*
Katsumata, Eijiro,	Suruga, Japan,	Education
Kauffman, Florence,	Pomona,	English
Kawai, Taiji,	San Francisco,	History
Kawara, Masaki,	San Francisco,	Elec. Eng
Kawashima, Umekichi,	Omi, Japan,	Physics *Sp.*
Kay, David Nelson,	Sacramento,	Geol. & Min
Ke, Kinsun,	Soochow, China,	Economics
Keech, Helen Jeannette,	Santa Ana,	Botany
Keesling, Hector,	San Jose,	Elec. Eng
Keesling, Homer Grant,	Eden Vale,	Elec. Eng.
Keesling, Mildred Capitola,	Campbell,	English
Kelley, Charlotte Jane,	Redlands,	History
Kelley, Leigh,	Ft. Smith, Ark.,	Economics
Kellogg, Roy Sheldon,	Pasadena,	Chemistry
Kelly, Edith Louise,	Oakland,	German
Kelly, Frank Vincent,	Los Angeles,	Mech. Eng.
Kelly, Henry Clay,	San Jose,	Law
Kelly, Walter Poundstone,	Los Angeles,	Law
Kelty, Clarence Vivian,	San Bernardino,	Law
Kendrick, Mary Carroll,	Los Angeles,	History
Kennedy, Edwin.	Livermore,	Mech. Eng.
Kennicott, Anna Townsend,	Westcliffe, Colo.,	Chemistry
Kercheval, Elbert Merwin,	Sacramento,	Chemistry
Kerr, William Horace,	Logan, Utah,	Law
Keym, Nellie Catherine,	Fairfield,	English
Kilgore, William Roberts,	La Junta, Colo.,	Civil Eng
Kimball, Letizia Moulton, A. B., Stanford, 1907.	Eureka,	History
Kimura, Tokuzo, A. B., Stanford, 1907.	Sendai, Japan,	Zoology
King, Harriet Schulze,	Banning,	Physiology
King, Preston Wallace,	San Luis Obispo,	Geol. & Min.
Kinley, Fielden,	Santa Rosa,	Elec. Eng.
Kirk, Mabel Louise,	Los Angeles,	Drawing
Kirkwood, Marion Rice,	Mountain View,	Law
Kite, Edwin Leon,	Redding,	Elec. Eng.
Klauber, Lawrence Monroe.	San Diego,	Elec. Eng.
Klein, George,	Mountain View,	Mech. Eng
Knapp, Bertha Jane,	Tehachapi,	German

Knipe, Olive,	Palo Alto,	English
Knollin, Herbert Edward,	Auburn, N. Y.,	Civil Eng.
Knowles, Paul Valerian,	San Francisco,	Latin
Knupp, Guy,	Porterville,	Law
Kobayashi, Teiji,	Oakland,	History *Sp*
Kocher, Alfred Lawrence,	San Jose,	History
Kocher, Rudolph Alfred,	San Jose,	Physiology
Koebig, Adolf Heinrich, Jr.,	Los Angeles,	Civil Eng.
Koehler, Charles Combes,	Tacoma, Wash.,	Economics
Koerner, William,	Oregon City, Ore.,	Geol. & M.
Koontz, John Andrew, Jr.,	Palo Alto,	Elec. Eng.
Kramm, Hugo Edmund,	Palo Alto,	Min. Eng.
Kroeck, Louis Samuel,	Los Angeles,	Physiology
B. S., University of Pacific, 1895; A. M., Stanford, 1897.		
Lacey, Rowland Sherman,	San Diego,	History
Lakin, Egerton Drew,	Palo Alto,	Law
Lamb, Earl,	San Jose,	Law
A. B., Stanford, 1905.		
Lambert, Elamae,	Woodland,	English
Lamborn, Bertha Taylor,	Palo Alto,	Latin
Lanagan, Frederic Rodgers,	Stanford Univ.,	Law
Lanagan, James Francis,	Palo Alto,	Law
A. B., Stanford, 1900.		
Landon, William Emerson,	Pasadena,	Civil Eng.
Langstroth, Francis Blackburn,	Oakland,	Geol. & Min. *Sp.*
Langstroth, Lovell,	Oakland,	Chemistry
Lanktree, Elizabeth Frances,	Stanford Univ.,	English
Lanktree, Maud Houston,	Stanford Univ.,	Drawing
A. B., University of California, 1902.		
Lantz, Carl Augustus,	Colton,	Chemistry
Lantz, Fred Otto,	Colton,	Elec. Eng
Larkins, Addie Lipton,	Visalia,	German
Larnach, Alexander Deuchar,	Honolulu, H. T.,	Law *Sp.*
Larson, Ethel Alma,	Pasadena,	Latin
Lashlee, Ralph Albert,	Redlands,	Elec. Eng.
Laughlin, Charles Eugene,	El Paso, Tex.,	Geol. & Min. *Sp.*
Laumeister, Clarence F.,	San Francisco,	Law
Lavayea, William Henry,	Covina.	Geol. & Min. *Sp.*
Lawson, Edith,	Sacramento,	English
Leach, Charles Nelson,	Stanford Univ.,	Chemistry
Leaf, Earle Mervin,	San Jose,	Law

Lehman, Estelle Jeanette,	Eureka,	Latin
Leib, Roy Chilton, A. B., Stanford, 1904.	San Jose,	Geol. & Min.
Lemmon, Dal Millington,	Santa Rosa,	Law
Lenfest, Blossom Edith,	Los Gatos,	History
Leonard, Florence A.,	San Bernardino,	English
Lester, Will I.,	Pueblo, Colo.,	Law
Levin, Harold,	San Francisco,	Law
Levy, Joe Paul,	Hueneme,	Economics
Levy, Leo Samuel,	San Francisco,	English
Lewis, Arthur Wayne,	Chicago, Ill.,	Law
Lewis, Ervin E., A. B., Stanford, 1907.	Brownville, N. Y.,	Education
Lewis, Helen Annette,	Palo Alto,	Botany
Lewis, James Ogier,	Pacific Grove,	Geology
Lewis, Ruth Elizabeth,	San Francisco,	Greek
Libbin, Thomas,	Palo Alto,	History
Liebes, Leon Isaac,	San Francisco,	Economics
Lilienthal, Jesse Warren,	Sacramento,	History
Limon, Gregorio,	Orizaba, Mexico,	Mech. Eng.
Lindauer, Samson Arthur,	Deming, New Mexico,	Law
Lipscombe, Maud May,	Saratoga,	Latin
Lisle, Howard,	San Jose,	Elec. Eng
Little, Marjorie Hadley,	Whittier,	Latin
Little, Robbins,	Pasadena,	Geol. & Min.
Long, Royce Reed,	Stanford Univ.,	Physiology *Sp.*
Lord, Wilma Grace,	Palo Alto,	Zoology
Losse, Etheridge Mills,	San Jose,	Law
Louis, Gilbert Ernest,	Riverside,	Geol. & Min.
Low, Isabel Tura,	Green Mountain, Ia.,	German
Lowe, Toy Kay,	San Francisco,	Mech. Eng.
Luchsinger, Albert George,	San Francisco,	Economics
Ludwig, Ethel R.,	Palo Alto,	English
Luhrs, Arthur C.,	Phoenix, Ariz.,	Geol. & Min.
Luke, Amy Genevieve,	Palo Alto,	English
Lull, Glenn W.,	Los Angeles,	Mech. Eng.
Lummis, Katherine, A. B., Lawrence University, 1890.	Baltimore, Md.,	Latin
deLuna, Mercedes Maria,	Los Angeles,	French *Sp.*
Lyman, Elizabeth Margaret,	Yuba City,	English
Lyman, Georgina,	Ft. Smith, Ark.,	English

Lyons, Raymond Houston,	Los Angeles,	Geol. & Min
Lyons, Willard Everet,	Los Angeles	Law
McAllister, Stella,	Sacramento,	History
McCann, Eugene Garrison,	Los Angeles,	Law
McCartney, Frederick Winfield,	Los Angeles,	Law
McChesney, Horace B.,	Palo Alto,	Civil Eng.
A. B., Stanford, 1907.		
McColloch, Claude C.,	Baker City, Ore.,	Law
McCollough, Vernon Clare,	Los Angeles,	Law
McCormac, Margaret Elizabeth,	Palo Alto,	Greek
McCowen, Hale, Jr.,	Ukiah,	Law
McCracken, Mary Isabel,	Oakland,	Entomology
A. B., Stanford, 1904; A. M., 1905.		
McCurdy, Edward Joseph,	Los Angeles,	Civil Eng.
McDaniel, George William,	San Francisco,	Mining Eng.
MacDonald, Augustus,	San Francisco,	Geol. & Min.
Macdonald, Alexander Stuart.	Portland, Ore.,	Mech. Eng.
McDonald, Edward Alexander,	Los Angeles,	Civil Eng.
McDonald, James Owens,	Compton,	Elec. Eng.
MacDonald, Marie Louise,	Fruitvale,	Zoology
Macdonald, William Griffith,	Stanford Univ.,	Law
McDowell, Alice Nagel,	Stanford Univ.,	Mathematics
McDuffie, William Chester,	Santa Barbara,	Economics
McElroy, Robert Wheeler,	San Francisco,	Law
McEwen, George Francis,	San Diego,	Physics
McFadden, Ralph John,	Palo Alto,	Geology
McFadden, Robert Clyde,	Palo Alto,	Elec. Eng
Macfarland, John Cobb,	Los Angeles,	Law
MacFarland, Olive Hornbrook,	Palo Alto,	Physiology
B. L., Ohio Wesleyan University, 1893 A. B., Stanford, 1906.		
McGeorge, Edith,	Eureka,	German
McGilvray, Jessie D.,	Stanford Univ.,	History *Sp.*
McGilvray, Walter Scott,	Stanford Univ.,	English
McGlashan, Earl Leo,	Truckee,	Law
McGovern, Anna Louise,	Palo Alto,	History
McGovern, Edward Joseph,	Palo Alto,	Law
LL. B., Stanford, 1906.		
McGregor, Ernest Alexander,	Stanford Univ.,	Zoology
McGregor, Gregor,	Benicia,	Civil Eng.
McGuire, John Perry,	Grand Junction, Colo.,	Elec. E.
McIntosh, George Wade,	Mentone,	Civil Eng. *Sp.*

MacIntyre, John Malcolm, A. B., Queen's College, 1892.	Phoenix, Ariz.,	Geol. & Min
McKay, Cecil Curtis,	Geneva, N. Y.,	Mech. Eng.
McKee, Abagail Frances,	San Jose,	English
McKell, William Scott,	Chillicothe, Ohio,	Physiology
MacKenzie, Kenneth Stuart,	Santa Rosa,	Law
McKeown, Edward Lawrence,	Gilroy,	Mech. Eng.
Mackey, Lorrain Banks,	Los Angeles,	Law
McKibben, Eva Leora,	Palo Alto,	Physiology
McKinley, Sara Fay,	Anaheim,	German
McLain, George Baundige,	Los Angeles,	Geol. & Min
MacLean, Hazel Douglass,	Salinas,	English
Macmillan, Alfred,	Palo Alto,	Geol. & Min.
McMillan, Cora Lilo,	Brown's Valley,	Education
McMurphy, James Ira Wilson,	Porterville,	Zoology *Sp*
McNeil, Warren Truett,	Tracy,	Physiology
Macomber, Frank Jewell, Jr.,	Los Angeles,	Law
Macomber, Lawrence Osgood,	Pasadena,	Law
McPheeters, George Carl,	Palo Alto,	Greek
Macpherson, Dorothea,	Palo Alto,	English
Macpherson, Frederick Roger,	Palo Alto,	Geol. & Min
McQuaid, Cole Clark,	Yuba City,	Economics
Macready, George Alexander,	Los Angeles,	Geol. & Min
McWethy, Jesse Robert,	Rialto,	Civil Eng
Maddox, Hazel Claire,	Visalia,	Zoology
Maddox, Ruth Evalina,	Visalia,	German
Madsen, Charles Peter,	Salt Lake City, Utah,	Physics
Mahone, Francis Douglas,	Honolulu, H. T.,	Elec. Eng.
Maine, Beatrice M.,	Riverside,	German
Malloy, Joseph Drumm,	San Jose,	Law
Malone, Maurice Young,	Hanford,	Law
Maloy, John W.,	San Jose,	Law
Manabe, Yoshiro,	Tadotsu, Japan,	Zoology *Sp.*
Mann, Horace,	San Carlos,	Geol. & Min.
Mansfield, George Curtis,	Los Angeles,	Law
Marceau, Daniel Victor,	Lockeford,	Law
Marchant, Clyde Coad,	Tustin,	Chemistry
Marshall, Hugh Gibson,	Monrovia,	Civil Eng.
Marshall, James William,	Los Angeles,	Geol. & Min. *Sp.*
Marshall, Ralph Kerr,	Phoenix, Ariz.,	Law
Martin, Alden Karl,	Reno, Nev.,	Law

Martin, David Greenleaf,	So. San Francisco,	Economics
Martin, George Everett,	Dixon,	Civil Eng.
Martinie, Joseph Clarence,	Palo Alto,	Physiology
Mason, Charles William,	San Francisco,	History
Masters, William Henry,	Portland, Ore.,	Law
Matchette, Orral,	McPherson, Kans.,	English
Mathews, Bryant,	Los Angeles,	Economics
A. B., Stanford, 1907.		
Mathews, Ralph Berkeley,	San Francisco,	Elec. Eng.
Mathewson, Arthur Adelbert,	Coronado,	Geol. & Min.
Mathiason, Gertrude Karen,	Los Angeles,	English
Matthews, Helen Lucy,	Salem, Ore.,	History
A. B., Stanford, 1901.		
Mattingly, Gladys Marie,	San Francisco,	Drawing
deMattos, Augustine Edward,	Watsonville,	Law
Maundrell, Harold Hugh,	San Francisco,	Economics
May, Belle,	Baker City, Ore.,	Latin
Mayers, Frank Bernard,	Phoenix, Ariz.,	Law
Mayreis, Louis John,	Stanford Univ.,	Mining Eng.
A. B., Stanford, 1907.		
Mealey, William Perry,	Compton,	Law
Melczer, Edward A.,	Phoenix, Ariz.,	Geol. & Min.
Melczer, Isadore,	Phoenix, Ariz.,	Law
Menardi, Harold Blair,	Los Angeles,	Chemistry
Menke, John Henry, Jr.,	Salinas,	Geol. & Min.
Menker, Earle Lincoln,	San Jose,	History
Menker, Raymond Chester,	San Jose,	Psychology
Meredith, Evan Kirkpatrick,	Menlo Park,	Civil Eng.
Mereen, John Dunning,	Minneapolis, Minn.,	Mech. Eng.
Merrill, John Albert,	Mountain View,	Law
Merrill, Paul Willard,	Saratoga,	Mathematics
Merriman, Lynn,	Palo Alto,	Chem. Eng
Merritt, Floyd Calhoun,	San Luis Obispo,	Geol. & Min.
Meston, Archibald Forbes,	Santa Barbara,	Mech. Eng
Metzner, Florence Prior,	San Francisco,	Botany
Meyer, Adele,	Palo Alto,	German
Meyer, Samuel William,	Butte, Mont.,	Chemistry
Meyers, Alfred E.,	Stanford Univ.,	Physiology
Miano, John Norton,	San Jose,	Elec. Eng.
Millar, Lois,	San Rafael,	Law
Millar, Paul E.,	San Rafael,	Latin

Miller, Alvera Elizabeth,	Skyland,	English
Miller, Iva Myrtle,	Santa Ana,	German
Miller, James Andrew,	San Francisco,	Law
Miller, James Irvin,	Grand Junction, Colo.,	Geol.
Miller, John Martin,	Reedley,	Zoology
Miller, John Owen,	San Francisco,	Civil Eng.
Miller, Maude Anita,	Salt Lake City, Utah,	French
Miller, Thesese Margaret,	Hollywood,	German
Milliken, Calla Rhetta,	Colton,	English
Milliken, Edward R.,	Pasadena,	Law
A. B., Pomona, 1904.		
Milliken, Ralph LeRoy,	Palo Alto,	History
Millis, William Lee,	Napa,	Geol. & Min.
Mills, Thomas Murray,	Riverside,	Civil Eng.
Millspaugh, Winnefred,	Los Angeles,	History
Minturn, LeRoy,	San Francisco,	Elec. Eng.
Mirrielees, Edith R.,	Bigtimber, Mont.,	English
A. B., Stanford, 1907.		
Mirrielees, Lucia Bush,	Bigtimber, Mont.,	English
Mitchell, Alexine,	Alameda,	English
Mitchell, John Pearce,	Palo Alto,	Chemistry
A. B., Stanford, 1903; A. M., 1904.		
Mitchell, John Shepard,	Ontario,	Law
Mitchell, Marion Otis,	Alameda,	English
Mitchell, Mowatt Merrill,	Los Angeles,	Economics
Mitchell, Robert Alexander,	Santa Rosa,	Civil Eng.
Mitoma, Taizo,	Oakland,	Elec. Eng. *Sp.*
Moise, Clarice Sara,	San Francisco,	French
Moise, Hazel Irene,	San Francisco,	Latin
Molfino, Albert Andrew,	Jackson,	Law
Monroe, Helen,	Omaha, Neb.,	German
Monteith, Minerva,	Paso Robles,	Physics
Montferrand, Alpiniano,	Orizaba, Mexico,	Mech. Eng.
Montgomery, Chester Arthur,	Palo Alto,	Elec. Eng.
Montgomery, James Evans,	Greenfield, Ind.,	Economics
Montgomery, Orland F.,	Tulare,	Law
Moore, Charles James,	Artesia, N. M.,	Botany *Sp.*
Moore, David Johnson,	New Wilmington, Pa.,	Law
Moore, Edith Harriet,	Pasadena,	German
Moore, Kirke Tonner,	Phoenix, Ariz.,	Law
Moore, Raymond Howard,	Boise, Idaho,	Law

Moorhead, James Barbour,	Los Angeles,	Mech. Eng.
Moran, Robert Breck,	Palo Alto,	Geology
Morehouse, Arthur Winfield,	Palo Alto,	Mech. Eng.
Morehouse, William Frank,	Palo Alto,	Chemistry
Morell, George Fowler,	Mayfield,	Law
Morgan, Jeanette Catherine,	San Diego,	German
Morgan, Jessie Caroline,	Los Angeles,	History
Morgan, Octavius Weller,	Los Angeles,	Civil Eng.
Morgan, Richard Sumner,	San Francisco,	Law
Morris, Agnes,	Bozeman, Mont.,	History
Morris, Benjamin Franklin,	Lewiston, Idaho,	English
Morris, Charles Shoemaker,	Pasadena,	Syst. Botany
Morris, Ruth Eyer,	Los Angeles,	English
Morrison, Charlotte Watrous,	San Francisco,	English
Morrison, Lela Idel,	Los Angeles,	French
Morrison, Wayland Augustus,	Los Angeles,	Physiology
Morrow, Ben Stogden,	Portland, Ore.,	Civil Eng.
Morton, Ivan,	Palo Alto,	Mech. Eng.
Morton, Stuart Curtis,	San Francisco,	Economics
Moser, Stuart,	Mt. Healthy, Ohio,	Civil Eng.
Moss, Harold Rae,	Palo Alto,	Chemistry
Moss, Lora Belle,	Palo Alto,	Mathematics
Motomura, Seizo,	San Francisco,	Elec. Eng.
Mott, Albert Gifford,	Lawrence,	Elec. Eng.
Mott, James Wheaton,	Salem, Ore.,	English
Motz, Arthur Frank,	Palo Alto,	Law
Motz, Ralph Leslie,	Butte, Mont.,	Geol. & Min.
Moulton, Lina,	Palo Alto,	German
Moulton, Mary Esther, A. B., Stanford, 1905.	Palo Alto,	Botany
Moulton, Stillman Moses,	Palo Alto,	Entomology *Sp.*
Mudd, Harvey Seeley,	Los Angeles,	Economics
Mues, Merle Brownie,	Palo Alto,	German
Munger, Arthur Lee, Jr.,	Palo Alto,	Physiology
Munier, Ferdinand Francis,	San Diego,	Law
Murdock, Effie Lisle,	Salt Lake City, Utah,	Latin
Murphy, Arthur Alban	Portland, Ore.,	Law
Murta, Margaret,	Ft. Smith, Ark.,	English
Myer, Arthur Henry,	San Francisco,	Economics
Myers, James Walter.	Portland, Ore.,	Education
Myers, Robert Folsom,	Bakersfield,	Elec. Eng.

Nakayama, Fumiya,	Kyoto, Japan,	Mech. Eng.
Nash, Edward Jay,	Palo Alto,	Elec. Eng.
Nason, Harry Ward,	Alameda,	Economics
Neal, Malcolm Allan,	Belmont,	Geol. & Min.
Neff, Clarence Wilson,	Fallbrook,	Geol. & Min.
Nelson, Ernest Bruce,	San Jose,	Drawing
Nelson, Hans Christian,	Field's Landing,	Law
Nelson, Ina May,	Lake Valley, N. M.,	Chemistry
Newburg, Lucile J.,	San Bernardino,	History
Newland, Lloyd,	Palo Alto,	Law
Newlin, Myrtle Alverson,	Fresno,	Latin
Newman, Fred Conrad,	San Jose,	Civil Eng.
Newman, James Vincent,	Woodside,	Civil Eng.
Nicholson, Anne Mary, A. B., Stanford, 1904.	San Jose,	Education
Nims, David Erwin,	Muskegon, Mich.,	Elec. Eng.
Nisson, Eric August,	Petaluma,	Chem Eng. *Sp.*
Nobs, Hattie Elsa, A. B., Stanford, 1905.	Redwood City,	German
Nohara, Shigeroku,	Kyoto, Japan,	Syst. Botany
North, W. Cuyler,	Cupertino,	Elec. Eng.
Northrup, Genevieve,	San Diego,	Physiology
Norwood, Clifford Taylor,	Redlands,	Mech. Eng
Norton, Ione May,	Rialto,	Latin
Norvell, Louise,	Merced,	History
Nye, Frank Charles,	Riverside,	Economics
Oakey, James Vernon,	San Bernardino,	Law
Oakey, John Miller,	San Bernardino,	Civil Eng.
Ochsner, Washington Henry,	Lexington, Ky.,	Geology
Officer, Elizabeth Logan,	Salt Lake City, Utah,	English
Ogden, Benjamin Franklin,	Moline, Ill.,	Economics
Ogier, Margaret,	San Jose,	Zoology
Ogier, Walter Tullidge,	San Jose,	Mech. Eng.
Ohannesian, Aram George,	Fresno,	Law
Oliver, Frank William, Jr.,	Wichita, Kans.,	Law
Olsson-Seffer, Runar Ivar,	Fruitvale,	Sys. Botany *Sp.*
Olsson-Seffer, Ragnar Michael, A. B., Helsingfors & Upsala, 1900.	Fruitvale,	Physiology
Oltmans, Jacob,	Melvin, Ill.,	Elec. Eng.
O'Neale, Lila Morris,	San Jose,	English
O'Neill, Helen Howard,	San Jose,	English

Oppenheimer, Sade,	Spokane, Wash.,	English
Osborn, Mabelle Frances,	Palo Alto,	French
Osborne, Clarence Bristol,	Los Angeles,	Geol. & Min
Osborne, Mattie Rankin,	Santa Barbara,	English
Osgood, Hattibel Harker,	San Jose,	English
Osgood, Marion,	San Jose,	English
Ostroski, Herbert Merton,	San Francisco,	Law
Otis, Arthur Sinton,	Pasadena,	Civil Eng.
Otto, Lucile Elizabeth,	Palo Alto,	German
Owen, Chauncy Carrol,	Pasadena,	Law
Owen, Elise Dorrance,	Stockton,	History
Packard, Ashley Burdett,	Naco, Ariz.,	Law
Paine, William Craig,	Redlands,	Elec. Eng.
Park, Charles V.,	Kidder, Mo.,	Economics
Park, Harriet,	Palo Alto,	English
Parker, Earnest Laverne,	Orange,	Civil Eng. *Sp.*
Parker, Franklin Thomas,	Astoria, Ore.,	Elec. Eng.
Palmer, Ethel Rebecca,	Los Angeles,	English
Palmer, Frederick Robie,	San Jose,	History
Park, Carl Joseph,	Palo Alto,	Civil Eng.
Parma, John	Santa Barbara,	Civil Eng.
Parsons, Benjamin Everett,	Highland,	Geol. & Min.
Parsons, Maurice Giesy,	Los Angeles,	Civil Eng.
Parton, Floyd.	San Jose,	Law
Patrick, Howard Borland,	Visalia,	Economics
Patterson, Alice Mabel,	San Jose,	Botany
Patterson, Edith Woodburn,	San Jose,	Physiology
Patterson, Ella Jane,	Long Beach,	History
Patterson, Henry Samuel,	Palo Alto,	Economics
Patterson, James Druillard,	Palo Alto,	Civil Eng.
Patterson, Rose W., **A. B., Stanford, 1907.**	San Jose,	Entomology
Patterson, William Herbert,	Palo Alto,	Law
Patzwald, Otto Reinhold, **A. M., University of Missouri, 1905.**	Menlo Park,	German
Paxton, Charles Hugh,	Orange,	Mech. Eng. *Sp.*
Pearce, Ellen Rose,	Hilo, Hawaii,	Latin
Pearce, Louise,	Los Angeles,	Physiology
Pearsall, Eva,	Tacoma, Wash.,	Latin
Peaslee, W. Dhu Aine,	Blue Cañon,	Elec. Eng.
Peckham, Arthur Bixie,	San Jose,	Geol. & Min

Pedlar, Calla Claire,	San Francisco,	English
Pemberton, Cryil,	Palo Alto,	Economics
Pemberton, John Rothwell,	Palo Alto,	Geol. & Min.
dePencier, John Arthur,	Sierra Madre,	History *Sp.*
Pepper, Helen Neville,	Los Angeles,	Latin
Perring, Anna Louise,	Palo Alto,	English
Perry, Claire Minne,	Palo Alto,	French
Perry, George Dorn,	Sandusky, Ohio,	English
Perry, Hunter Carlyle,	Roanoke, Va.,	Economics
Perry, Wilfred Sprague,	Waterbury, Conn.,	Economics
Peters, Herman,	Santa Cruz,	German
Peterson, Clarence Jennings,	Honolulu, H. T.,	Geol. & Min.
Peterson, Elsa,	Honolulu, H. T.,	Sys. Botany
Pettingill, Tallahatchie,	Redlands,	History
Peyton, Robert Clark,	Los Angeles,	Law
Phelps, Clarence Lucien,	Mayfield,	Law
Phelps, John,	Los Angeles,	Law
Phelps, John Dudley,	San Francisco,	Chemistry
Philippi, Beatrice Genevieve,	Los Angeles,	English
Phinney, Arthur Alexander,	Seattle, Wash.,	Law
Phinney, Will Carleton,	Seattle, Wash.,	Law
Pickering, Loring C. F.,	San Francisco,	Law
Pickett, Harry Elliott,	Palo Alto,	Law
Pieper, James Frederick,	Palo Alto,	Civil Eng.
Pier, Earl Harriman,	Santa Clara,	Law
Pierce, Samuel Hatch,	Palo Alto,	Law *Sp.*
Pierce, William John,	Auburn, N. Y.,	Chemistry
Pierpont, Philip,	Nordhoff,	Civil Eng.
Piper, Merle Bentley,	San Jose,	Civil Eng.
Plaskett, Frank Waldo,	Salinas,	Mech. Eng.
Plummer, Ethel Tennent,	Alameda,	History
Poage, Johanna Lelia,	Azusa,	Mathematics
Poage, Leland Starke,	Azusa,	Economics
Poindexter, Robert Wade,	Los Angeles,	Chemistry
Polaski, Rosetta,	Los Angeles,	English
Polhemus, James Henry,	Portland, Ore.,	Civil Eng.
Politzer, Jerome Maximilian,	Alameda,	Law
Polson, Anna,	San Jose,	History
Pomeroy, Frank Kenneth,	Palo Alto,	Chemistry *Sp.*
Poor, Henry Varnum,	Palo Alto,	Economics

Poor, Herbert Emery,	Kansas City, Mo.,	Chem. Eng.
Porter, Arthur M.,	Berkeley,	Civil Eng.
Post, Fred Dan,	Rockford, Ill.,	Chem. Eng.
Post, Mary Bolton,	Palo Alto,	English
Pratt James Hamilton,	Honolulu, H. T.,	Chem. Eng.
Pratt, Robert Risdon,	Stanford Univ.,	Mech. Eng.
Preciado, Abram A.,	Madera,	Law
Preisker, Ernest Charles,	Milpitas,	Economics
Prescott, Basil,	San Diego,	Mining Eng.
Presley, George Joseph,	San Francisco,	Law
Prevost, Charles Austin,	San Jose,	Law *Sp.*
Price, Berdella,	Soquel,	Latin
Price Christine,	Palo Alto,	History
Price, Harry Lawrence,	San Diego,	Law
Price, Jacob Meday,	Palo Alto,	Chem. Eng.
Pridham, Edwin Stewart,	San Gabriel,	Physics
Prien, Eda Caroline,	San Francisco,	German
Prior, Percy Harley,	San Jacinto,	Elec. Eng.
Proctor, Asa Glisson,	Woodland,	Civil Eng.
Proctor, James Norris,	Ventura,	Zoology
Pruett, John Floyd,	Fallbrook,	Physiology
Pugh, Doris,	Redwood City,	English
A. B., Stanford, 1907.		
Pugh, Harriet Holmes,	Redwood City,	History
Purdum, Ernest Reynolds,	Colton,	Law
Purdum, Edith May,	Colton,	English
Quertermous, Roy Crawford,	Santa Cruz,	Civil Eng. *Sp.*
Quinn, William Arthur, Jr.,	Henderson, Ky.,	Physiology
Ramsey, Lilian,	Palo Alto,	Entomology
Ramsey, Reginald Crawford,	Palo Alto,	Geol. & Min.
Ramsdell, Harvest Richard,	Kent,	Civil Eng.
Rand, Chester,	Los Angeles,	Elec. Eng. *Sp.*
Randall, Charles Alfred,	Stanford Univ.,	Min. Eng. *Sp*
Randall, Josephine L. Dows,	Stanford Univ.,	Zoology
Ransom, Charles K.,	Pasadena,	Elec. Eng.
Ransom, Frederic Garfield,	Lancaster, N. Y.,	Chemistry
Ransom, Ruth,	Palo Alto,	Mathematics
A. B. Vassar College, 1906.		
Rattray, Robert Allen,	Long Beach,	Law
Rawdon, Mary Ellen,	Carmel,	Drawing
A. B., Stanford, 1905.		

Rawles, Wesley Mock,	Boonville,	Geol. & Min.
Rawson, James Peterson,	Hemet,	Education
Ray, James Chandler,	Stanford Univ.,	Geol. & Min
Raymond, Claudius H.,	Los Angeles,	Economics.
Read, William,	Philadelphia, Pa.,	Civil Eng.
Redman, Frank M.,	Fargo, N. D.,	Elec. Eng
Reed, Haines Wadsworth, **A. B., Stanford, 1907.**	Los Angeles,	Economics
Reed, Harold Eugene,	Portland, Ore.,	Law
Reed, Harry Earl,	Palo Alto,	Economics.
Reilly, John Franklin,	Portland, Ore.,	Law
Reining, Charles,	Palo Alto,	German.
Reynolds, Leon Benedict,	Palo Alto,	Civil Eng.
Reppy, Vera May,	Ventura,	Greek.
Reyburn, Chester Ray,	Fresno,	Civil Eng
Reyburn, Emory Everett,	Fresno,	Elec. Eng. *Sp.*
Reyburn, Ida May,	Fresno,	Drawing
Reynolds, Ralph Hubbard,	Pasadena,	Law
Rhyne, Homer,	Paso Robles,	Geol. & Min.
Rible, Lillie May,	Sacramento,	English
Rice, Edward, Waldo,	Stanford Univ.,	Chemistry *Sp.*
Rice, Warren Sumner,	Edenvale,	Geol. & Min.
Richards, Dexter Newell,	Gridley,	Physiology
Richards, John Percy,	San Jose,	Chemistry
Richardson, Eri Horner,	Palo Alto,	Sys. Botany
Richardson, Eugene Arthur,	Petaluma,	Greek *Sp.*
Richardson, Eulalia,	Tropico,	Mathematics.
Richardson, Girard Nye,	Oakland,	Law
Richardson, Walter Hamilton.	Santa Barbara,	Civil Eng.
Richmond. Ruth. **B. S., Pomona, 1906.**	Claremont,	Zoology
Riddell, John Henry,	Brazil, Ind.,	Civil Eng.
Riebsam, Henrietta E.,	San Jose,	Education.
Riehl, Oscar,	Palo Alto,	Elec. Eng.
Riesner, Roy Milton,	San Francisco,	Geol. & Min.
Ringheim, David Theodore,	Long Beach,	Law
Rixford, Halsey Luther,	San Francisco,	Economics
Robbins, Alice May,	Los Angeles,	English
Robbins, Charles Harvey,	Goldfield, Nev.,	Law
Robbins, James Clayton,	Spokane, Wash.,	Geol. & Min.
Roberts, Charles Loring,	Eureka,	Civil Eng.

Roberts, John Walter,	Redlands,	Economics
Roberts, Ruberta Augusta,	San Jose,	Zoology
Robertson, Edna Ruth,	Redwood City,	History
Robertson, Frank Alexander,	Grand Forks, N. D.,	Law
Robertson, Harry,	Redwood City,	Chemistry
Robertson, William Ardis,	Los Angeles,	Law
Robinson, Edith Emma,	Salinas,	Latin
Robinson, Lucy Adeline,	Los Angeles,	Mathematics
Robinson, Philip Archibald,	Benicia,	Elec. Eng
Robinson, Sarah Alice, A. B., Stanford, 1907.	Oakland,	Drawing
Robinson, Thomas Edgar,	Stanford Univ.,	Law *Sp.*
Robison, Aleta,	Palo Alto,	History
Robotham, Edna May,	Redlands,	French
Rockey, Eugene Watson,	Portland, Ore.,	German
Roedel, Alice Louise,	San Mateo,	Latin
Roesner, Gwendolen,	Kent,	English
Rogers, Edwin Allan,	San Francisco,	Mech. Eng
Roll, Julia Irene,	Santa Clara,	German
Ronzone, Silvio Espy,	Redlands,	History
Roop, Wendell Prescott,	Oakland,	Physics
Rose, Jessie Perkins,	Palo Alto,	Physiology
Rosenberg, Albert H.,	San Francisco,	Elec. Eng.
Rosenberg, Leo M., A. B., Stanford, 1907.	Oakland,	Mining Eng.
Rosenfeld, Arthur,	Portland, Ore.,	Physiology
Rosenkranz, Elias Victor,	Los Angeles,	Law
Rosenthal, Phyllis Hana,	San Jose,	English
Ross, Hananiah Hugh,	Masontown, Pa.,	Chemistry
Ross, Harry Scott,	Pasadena,	Chemistry
Ross, Lee Thornton. A. B., Stanford, 1907.	Belmont,	Law
Ross, Perley Ason,	Fallbrook,	Physics
Roth, Almon Edward,	Willits,	Law
Rounds, Merle Ballard,	Wichita, Kans.,	Economics
Rowe, Ethel Elizabeth,	Pawtucket, R. I.,	German
Rowell, Gertrude Frances, A. B, Stanford, 1901.	San Jose,	Education
Rowell, Ola Lois,	San Jose,	Zoology
Rubin, Joseph Mordecai,	Leipsig, Germany,	German
Ruggles, Howard Edwin,	Ross,	Physiology

Runyon, John Howard,	Stanford Univ.,	Geol. & Min.
Rush, Mary Elizabeth,	Hollywood,	English
Russell, Henrietta Elizabeth,	Tulare,	Latin
Rust, Everett Winder,	Pasadena,	Sys. Botany
Rutherford, Dorsey J.,	Pomona,	Civil Eng.
Ryan, John Joseph, A. B., Stanford, 1903.	San Jose,	History
Sales, Dudley Daniel, A. B., Stanford, 1906.	Stanford Univ.,	Law
Salisbury, Stuart McFarland,	Los Angeles,	Law
Sampson, Arthur Eugene,	Grants Pass, Ore.,	Elec. Eng.
Sampson, Carlos Eugene,	Stockton,	Elec. Eng.
Sampson, George Henry, A. B., Stanford, 1897.	Portland, Ore.,	Geol. & Min.
Samuel, Ford Edwards	Alameda,	English
Sanborn, Clarence Charles,	Tilton, N. H.,	Economics
Sandstedt, Carl Edward,	Spangle, Wash.,	Civil Eng.
Saunders, Benjamin Rankin,	Redwood City,	Geol. & Min.
Savage, Harry King,	Stanford Univ.,	Civil Eng. *Sp.*
Sawyer, Ernest Walker,	Stanford Univ.,	Civil Eng.
Schaaf, Daniel Louis,	San Jose,	Elec Eng.
Schaupp, Ernest G.,	Santa Rosa,	German
Scherzer, Mary Ann, A. B., University of Nebraska, 1900.	Dorchester, Neb.,	Latin
Schnack, Adolph George C.,	Honolulu, H. T.,	Chemistry
Schnack, Ferdinand John H.,	Honolulu, H. T.,	Law
Schuele, George Edward,	Vancouver, Wash.,	Elec. Eng
Schuler, Irvin Henry,	Yuba City,	Mech. Eng.
Schwabacher, Samuel Isaac,	San Francisco,	Chemistry
Schwennesen, Alvin Theodore,	Clayton,	Geol. & Min.
Scofield, William Launcelot,	Palo Alto,	Botany
Scott, Leland,	Alameda,	Drawing
Scull, Carrie Beatrice,	Santa Barbara,	English
Searcy, Charles Louis, B. C. E., Purdue University, 1901, C. E., 1902; A. B., Stanford, 1904.	Santa Rosa,	Mathematics
Seargeant, James Everett, A. B., Ewing Col., 1905.	Ewing, Ill.,	Law
Searles, William Leslie,	Auburn, N. Y.,	Civil Eng.
Sears, Harry Johnson,	Palo Alto,	Economics
Sears, Jesse Brundage,	Palo Alto,	Education
Seaton, Roland Moore,	Santa Rosa,	Civil Eng.

Seibert, Donald Kingsland,	San Francisco,	Law
A. B., Stanford, 1905.		
Seitz, Joseph William,	Mountain View,	Law
A. M., Georgetown University, 1904.		
Seminario, Leopold,	San Francisco,	Mech. Eng.
Severy, Clarence Luther,	Pasadena,	Geol. & Min
Severy, Hazel Wood,	Pasadena,	Chemistry
Sevier, Florence M.,	Eureka,	Latin
Seybolt, Marion Leigh,	Oakland,	English
Sferlazzo, Carlo,	Mayfield,	Law *Sp.*
Shaner, George Franklin,	Los Gatos,	Law
Shanks, Murray Daniel,	Palo Alto,	Geol. & Min.
Shedd, Solon	Pullman, Wash.,	Geology
A. B., Stanford, 1896.		
Sheibley, Edward Gwyn,	Stanford Univ.,	Civil Eng.
Sheldon, Edwin Rowley,	Palo Alto,	Law
Shelton, James Errett,	San Jose,	Law
Shelton, William Cortez,	San Jose,	Law
Shepardson, Anita Arline,	St. Paul, Minn.,	History
Shibamiya, Yosohiko,	Tokyo, Japan,	English
Shinn, Alice Eleanor,	Oakland,	English
Shoemaker, Benjamin Dey,	Pasadena,	Chem. Eng.
Shoemaker, Clyde Clarence,	Orange,	Law
Show, Stuart Bevier,	Palo Alto,	Syst. Botany
Shumate, Anna Matt,	Palo Alto,	History
Shutt, Nathan Emery,	Santa Monica,	Chemistry
Shutts, Arthur Burton,	Palo Alto,	Geol. & Min.
Sidwell, Wilson,	Palo Alto,	Civil Eng.
Sieber, Elsa Marie,	Woodland,	German
Silent, Chester,	Los Angeles,	Law
*Simpson, Walter Irving,	Mayfield,	Education
A. B., Stanford, 1907.		
Sinclair, Myra Anna,	Palo Alto,	Latin
Sinnock, Frank Brown,	Quincy, Ill.,	Civil Eng.
Sirdevan, William Henry,	Olean, N. Y.,	Geol. & Min.
Skahen, Vance Edward,	San Mateo,	Law *Sp.*
Skinner, Edwin Hume,	Palo Alto,	Romanic Lang.
A. B., Stanford, 1903.		
Skinner, Marian Weymouth J.	Stanford Univ.,	English
A. B. Radcliffe College, 1903.		
Slack, Walter,	Hastings, Neb.,	Law

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*Died February 18, 1907.

Slusher, Dale	Pendleton, Ore.,	Geol. & Min.
Smallpage, Lafayette John,	Palo Alto,	Law
Smith, Avis Katherine,	San Luis Obispo,	Greek
Smith, Caroline Rowell,	Evanston, Ill.,	French
Smith, David Drake,	Los Angeles,	Civil Eng
Smith, Edgar C.,	Pocatello, Idaho,	Civil Eng
Smith, Egbert Alling,	Napa,	Law
Smith, Ernest Nathaniel,	Stanford Univ.,	Law
Smith, Francis Marshall,	San Francisco,	Civil Eng. *Sp.*
Smith, Glenn Irwin,	Auburn, N. Y.,	History
Smith, Grover Cleveland,	Colton,	Drawing
Smith, Harold Fred,	Campbell,	History
Smith, Harry Ellsworth,	Saratoga,	Law
Smith, Jesse Winter,	Salt Lake City, Utah,	Civ. Eng.
Smith, Lucas F., Jr.,	Santa Cruz,	Law
Smith, Mildred,	Redwood City,	Spanish
Smith, Richard Garbett,	Los Angeles,	Geology
Smith, Stuart Sawyer,	Campbell,	Economics
Smith, Warren Perce,	Portland, Ore.,	Elec. Eng
Snell, Thomas William,	West Saticoy,	Elec. Eng.
Snyder, Edwin Reagan, A. B., Stanford, 1905.	San Jose,	Education
Soo-Hoo, Peter,	Oakland,	Mech. Eng.
Soper, Edgar Kirke,	Palo Alto,	Geol. & Min.
Southard, William White,	Redlands,	Physiology
Sowles, Lewis William,	Salt Lake City, Utah,	El. Eng.
Spalding, William Dennison,	Los Angeles,	Civil Eng. *Sp*
Spangler, Colin Irving,	Palo Alto,	English
Spaulding, Silsby Morse,	Los Angeles,	English
Spaulding, Charles Edgar,	Los Angeles,	Elec. Eng
Spencer, Esther Jean,	Los Angeles,	Latin
Sperry, George A., Jr.,	Nephi, Utah,	Education *Sp.*
Spinner, Mabel Mary,	Eureka, Nev.,	Mathematics
Spurrier, George Otis,	Paso Robles,	Economics
Squire, Frank Carter,	Claremont,	Civil Eng.
Squire, Mary Louise,	Visalia,	Physiology
Stadtmüller, Ellen Smith,	San Francisco,	Physiology
Stafford, Harry I.,	San Francisco,	Law
Stager, Cora Elizabeth,	College Park,	German
Stagner, Charles Elmer,	Wheatland,	Physiology
Stallcup, Evan Shelby,	Tacoma, Wash.,	Law

Stallcup, Margery Bruen,	Tacoma, Wash.,	Law
Stanford, James Nichols, A. B., Stanford, 1907	Olympia, Wash.,	English
Stanley, Leo Leonidas,	San Miguel,	Physiology
Stanton, Frederick Leroy,	Spokane, Wash.,	Law
Stark, Edwin Marion,	Mansfield, Ohio,	Geol. & Min.
Stark, William Harvey,	Louisiana, Mo.,	Botany
Starnes, Xaver Brand,	Ashville, N. C.,	Geol. & Min.
Starr, Sarah Helen,	Seattle, Wash.,	History
Stauf, Ida,	Palo Alto,	Drawing
Steel, Donald,	Brownsville,	Geol & Min
Steele, Viola Alice,	Los Angeles,	English
Steinbeck, Charles Earl,	Stockton,	Mech. Eng.
Steinberger, Arthur Adolph,	San Francisco,	Law
Sterling, Edward Canfield,	Redlands,	Economics
Sterne, Ruth Grace,	San Diego,	German
Stevens, Archie McDonald,	Palo Alto,	Mech. Eng.
Stevens, Esther Stuart,	Berkeley,	English
Stevenson, Cornelia, A. B., Stanford, 1907.	Seattle, Wash.,	German
Stevenson, Harvey James,	Hollywood,	Law *Sp.*
Stewart, John Elmer,	Parkville, Mo.,	Law
Stewart, Milton Sheldon,	Santa Barbara,	Geol. & Min.
Stewart, Paul,	Los Angeles,	Law
Stillman, Edgar,	San Francisco,	German
Stinson, Sylvia Della,	Palo Alto,	German
Stockwell, Eugene Lafayette,	Cottage Grove., Ore.,	Law
Stolle, Francis,	Palo Alto,	Physiology
Stolle, Helen,	Palo Alto,	German
Stone, Alice Grace, A. B, Stanford, 1905.	San Jose,	Latin
Stone, Alta Dorthula,	Tropico,	Physics
Stone, Bessie,	Camden, N. Y.,	English
Stott, Edmund Plowden,	Portland, Ore.,	Law
Stover, Roy Bales,	San Diego,	Law
Streeter, Olive Louisa,	Cupertino,	History
Streeter, Richard Summers,	Cupertino,	Civil Eng
Strong, Charles Arthur,	Palo Alto,	Civil Eng
Stull, Floyd Alfred,	San Jose,	Economics
Stull, Karl Madsen,	San Jose,	Economics
Stuntz, William Oliver,	Palo Alto,	Botany

Sturgiss, Lillian Gardner,	Stanford Univ.,	English
Sturla, Rose Florence,	Mountain View,	History
Suits, Charlotte Belle,	Santa Monica,	English
Suits, Clarence Leroy,	Santa Monica,	Chemistry
Swart, Frank,	New Paris, Ind.,	Law
Sweet, Shirly Glidden,	Elbridge, N. Y.,	Economics
Swickard, James Blaine,	Edenvale,	Civil Eng.
Swift, Ernest John,	Santa Cruz,	Law *Sp.*
Swift, May Viola,	Montecito,	Mathematics
Swift, Ruth,	Santa Cruz,	German
Swift, Vega,	Santa Cruz,	English
Symonds, Bessie Marjorie,	San Jose,	Physiology
Tafel, Ernest Ara,	Palo Alto,	Law *Sp.*
Taft, Harris Welch,	Santa Monica,	Law
Taft, Muriel Charlena,	Santa Monica,	English
Taggart, Arthur Fay,	Palo Alto,	Geol. & Min.
Taggart, James Deacon,	Santa Barbara,	Elec. Eng.
Talbot, Sterling John,	Pasadena,	Greek
Talboy, Frederick Richard,	Palo Alto,	Law *Sp.*
Tallant, Edward Percy,	Santa Barbara,	Elec. Eng
Tarbell, George Armstrong,	Cumberland, B. C.,	El. Eng. *Sp*
Taverner, Clara Louise,	San Francisco,	English
Taylor, Alfred Loomis,	Stanford Univ.,	Chemistry
Taylor, Cary Pebbles,	Chico,	Elec. Eng.
Taylor, Charles Marvin,	Menlo Park,	Civil Eng.
Taylor, John Calvin,	Fruitvale,	Entomology
Taylor, Nain,	San Diego,	English
Taylor, Nelson,	Los Angeles,	Civil Eng. *Sp.*
Tays, James Anthony,	Ontario,	Chemistry
Teel, Claude Cameron,	Bishop,	Geol. & Min
Telfer, William Jack,	San Jose,	Law
Templeton, Eugene Crittenden,	Santa Ana,	Geol. & Min.
Terrill, Chester Charles,	San Francisco,	Civil Eng.
Terry, Alexander Augustus,	Lisbon, Portugal,	Elec. Eng.
Thayer, Jessie Shirlaw,	San Francisco,	Latin
Theile, William Christian,	Stanford Univ.,	Law
Thoburn, Helen,	Palo Alto,	German
Thomas, Edna Rose,	Whittier,	Physiology
Thomas, Halbert Ray,	Los Angeles,	Elec. Eng.
Thomas, Henrietta Gilstrop,	Woodland,	Greek

Thomas, Iva,	South Pasadena,	Latin
Thomas, William Henry,	Palo Alto,	Elec. Eng.
Thompson, Alexander McKnight,	Seattle, Wash.,	Law
Thompson, Della,	Whittier,	Latin
Thompson, Elizabeth,	Palo Alto,	English
Thompson, Estelle,	San Jose,	Drawing
Thompson, Ewing Charles,	Lewiston, Idaho,	Civil Eng.
Thompson, Hannah Trainer,	Pasadena,	German
Thompson, John Hamer,	San Jose,	Entomology
Thompson, John Ibbotson,	Pueblo, Colo.,	Mech. Eng.
Thompson, Seth Blaine,	Butte, Mont.,	Law
Thompson, Will Howard,	Riverside,	Mech. Eng.
Thomson, Hugh Leslie, A. B., Stanford, 1907.	Burlington, Vt.,	Chemistry
Thornley, Genevieve Helen,	Tacoma, Wash.,	English
Thorpe, Charles Alfred,	Ioamosa,	Drawing
Thornton, John Ray,	Palo Alto,	Civil Eng.
Thurmond, Blanche Amelia,	Carpinteria,	German
Tilton, Frederic LeRoy,	Colorado Springs, Colo.,	Law
Todd, Monette Osie,	Riverside,	History
Todd, Rose Sophia,	Gardnerville, Nev.,	Latin
Todd, Ward Waldo,	Santa Barbara,	Physiology
Tomasini, Almo,	Palo Alto,	Civil Eng.
Tomblin, Hazel Adele,	Ocean Park,	History
Topp, Roger,	Stanford Univ.,	Mech. Eng.
Tower, Mary Sherburne,	San Jose,	German
Tracy, Helen Morey,	Pasadena,	English
Tripp, Russell Butler,	San Jose,	Civil Eng
Tucker, William Henry,	San Jose,	Law
Tully, John,	San Jose,	Law
Tupper, James Tullius,	Fresno,	Law
Turner, Frank Warren,	Stanford Univ.,	Geol. & M. *Sp.*
Turner, Maude Elizabeth,	Talmage,	Latin
Tuttle, Albert Leon,	Stanford Univ.,	Law
Tuttle, John Raymond,	Sacramento,	History
Twombly, Harriet Elizabeth,	Palo Alto,	Physiology
Tyler, Willard Thurston,	Palo Alto,	Elec. Eng.
Upson, Burchell Williams,	Sacramento,	Civil Eng.
Utter, Ben Watkins,	Sacramento,	Economics
Utzinger, Otto Emile,	Astoria, Ore.,	Civil Eng.
Vail, Stanley Marshall,	San Francisco,	Economics

Vail, Alida,	San Francisco,	History
Valentine, Percy Friars,	Sacramento,	Law
Vanatta, Leon Paul,	San Francisco,	Elec. Eng.
Van Campen, Frank Rumsey,	Palo Alto,	Geol. & Min
Vandervoort, Theodore, Jr.,	Palo Alto,	Geol. & Min.
Van Deursen, John Myron,	San Bernardino,	Economics
Van Epps, Carolyn Mae,	Palo Alto,	Drawing
Van Etten, Percy Hixon,	Palo Alto,	Mech. Eng.
Van Velzer, Leroy Ward,	Fallbrook,	Mathematics
Van Zwalenburg, Mabel E.,	Riverside,	German
Vestal, Maxwell,	San Jose,	Elec. Eng
Vincent, Vita Grace,	Oakland,	Zoology
Vose, Clarence Hoy,	Chicago, Ill.,	Economics
Wadsworth, Hazel Marie,	Palo Alto,	English
Wadsworth, James Milton,	Palo Alto,	Civil Eng.
Walbridge, Lester Sinclair,	Los Angeles,	Greek
Walker, David Henry, Jr.,	San Francisco,	Mech. Eng.
Walker, Ralph Henry,	Visalia,	Law
Walker, Richard Washington, **C. E., Lehigh University, 1884.**	Glen Moore, Pa.,	Education
Walker, William Moore,	Los Angeles,	Law
Wallace, Ethel,	Visalia,	History
Wallace, Guy,	Redlands,	Chemistry
Wallace, John Thomas, Jr.,	San Jose,	English
Ward, Helen McPherson,	San Diego,	English
Ward, John McCartney,	San Diego,	Law
Ward, Milola Joy, **A. B., Stanford, 1907.**	Portland, Ore.,	Syst. Botany
Ward, Terry Wilson,	Merced,	English
Ward, Wendell William,	Los Angeles,	History
Warlow, Chester Harvey,	Fresno,	Law
Warmoth, Lenna Jane,	Berkeley,	Mathematics
Warner, Mary,	San Jose,	Chemistry
Warren, Edwin Vincent,	Pacific Grove,	Zoology *Sp.*
Warren, Herbert Clifton,	Glendora,	Mech. Eng.
Warrior, Mabel,	Palo Alto,	Drawing
Wassman, Max, Jr.,	San Jose,	Law
Wasson, Caroline Elizabeth,	Vancouver, Wash.,	French
Watanabe, Teiichiro,	Tokyo, Japan,	Civil Eng.
Watkins, Mary Martha,	Los Angeles,	History
Watkins, Zoe Lucile,	Kingman, Ariz.,	History

Watson, Paul Robert,	San Diego,	Civil Eng.
Watters, Ethel Madelaine,	Santa Cruz,	Physiology
Waugh, Clarence Wendell,	Brooklyn, N. Y.,	Physiology
Weaver, Elmer Rupel,	Glendora,	Chem. Eng.
Weaver, Emma Angeline,	San Jose,	English
Weaver, Gertrude Benjamin,	Palo Alto,	Psychology
Weaver, Stuart Eldridge,	Palo Alto,	Mech. Eng.
Webber, Burpee Ogilvie,	Santa Cruz,	Civil Eng.
Webber, Marjorie,	Alameda,	English
Weills, Grace Virginia,	Terre Haute, Ind.,	History
Weills, Mary Ruby,	Terre Haute, Ind.,	German
Wells, George Rowley,	Santa Ana,	Civil Eng.
Wells, Laura,	Wailuku, H. T.,	English
Wenk, Morris,	Stockton,	Elec. Eng. *Sp.*
Wentz, Walter Yeeling,	San Diego,	English
A. B., Stanford, 1906.		
Weston, John Charles,	Los Angeles,	History
Wetmore, Clyde T.,	San Jose,	Physiology
Weymouth, Frank Walter,	Tacoma, Wash.,	Zoology
Wheeler, Ward Huey,	Los Gatos,	Law
B. S., Cornell College, 1906.		
Wheeler, William Webb, Jr.,	St. Joseph, Mo.,	Economics
White, Hazel Maude,	Los Angeles,	History
White, Henry Austin,	Honolulu, H. T.,	Civil Eng.
White, John Blackwood,	Spokane, Wash.,	History
White, Walter Noy,	Los Angeles,	Civil Eng. *Sp.*
Whitmire, Ethel Dorothy,	San Jose,	Latin
Wiggins, John Henry,	Bennings, D. C.,	Civil Eng.
Wight, Cynthia Titus,	San Jose,	English
Wilde, Frank Laquer,	Dobbs Ferry, N. Y.,	Geol. & M.
Wilhelm, Frederick S.,	Portland, Ore.,	Law
Wilhelm, Victor H.,	Portland, Ore.,	Geol. & Min.
Wilkins, Helen Morse,	Bolinas,	English
Willard, John D.,	Palo Alto,	Law *Sp.*
Williams, Francis Xavier,	San Francisco,	Entomology
A. B., St. Ignatius College, 1903.		
Will, Roland Tracy,	Redlands,	Chemistry
Williams, Mary Wilhelmine,	Palo Alto,	History
Williams, Maude Hughes,	Madera,	English
Wilson, Beulah M.,	Ocean Park,	German
Wilson, Clarence John Ramsey,	Los Angeles,	Civil Eng.

Wilson, Emma Jean,	Los Angeles,	Latin
Wilson, Francis Goodspeed,	Santa Cruz,	Economics *Sp.*
Wilson, Horace S.,	Los Angeles,	Law
Wilson, Julia Edna,	Palo Alto,	French
A. B., Stanford, 1906.		
Wilson, Will Amos,	Palo Alto,	Elec. Eng.
Wilson, William Webster,	Los Angeles,	Elec. Eng. *Sp.*
Wiltz, Bertha Amelia,	San Jose,	Physiology
Wiltz, Lena G.,	San Jose,	Drawing
Winslow, Mercelia Anna,	Monrovia,	Drawing
Winter, Arthur Leafland,	Ione,	Chemistry
Winter, Paul John,	Ione,	German
Wintler, Clarence Henry,	Vancouver, Wash.,	Elec. Eng.
Wirt, William,	Santa Rosa,	History
Witmer, Roy Cook,	Pasadena,	Civil Eng.
Wondries, Charles Henry,	Los Angeles,	Civil Eng.
Wood, Dallas England,	Merced,	Law
Wood, Frederick Bertram,	Palo Alto,	English
Wood, George William,	Santa Cruz,	Mathematics
Woodard, John Daniel,	Yolo,	Law
Woodbury, James Sheldon,	Carson City, Nev.,	Economics
Woods, Armond Harry,	Stockton,	Law
Woods, Robert S.,	Los Angeles,	Elec. Eng.
Woods, Ruby Claire,	Palo Alto,	German
Worthington, Robert Strong,	San Jose,	Law *Sp.*
Wright, Adaline,	Pasadena,	German
Wright, Alfred,	Los Angeles,	Law
Wright, Cleveland Ross,	Elko, Nev.,	Law
Wright, Elizabeth Agnes,	Plymouth, Mass.,	German
Wyatt, Frank K.,	San Diego,	Elec. Eng. *Sp.*
Wyckoff, Harry Alphonso,	Palo Alto,	Physiology
Wynne, Edward Cyril,	San Francisco,	Law
Wynne, Estella Frances,	San Francisco,	English
A. B., Stanford, 1907.		
Yabe, Masao,	Chiba, Japan,	Economics *Sp.*
Yamakawa, Shunzo,	Osaka, Japan,	English *Sp.*
Yasuda, John Katsukichi,	San Francisco,	Economics
Yoder, Noah S.,	Palo Alto,	English
Yorke, Edwina,	Sacramento,	English
Yoshida, Kei-ich,	Fukuoka, Japan,	Elec. Eng.
Yost, Laurel Vane,	Redlands,	English

Youker, Malcolm Phillip,	Santa Rosa,	Civil Eng.
Young, Albert Loftus,	San Francisco,	Physiology
Young, Elmer Ellis,	Portland, Ore.,	Law
Young, Hayes Wilson,	Mojave,	Geol. & Min.
Young, John Arthur,	Colton,	Mech. Eng.
Young, William Thomas,	Ft. Jones,	Physiology
Zacharias, Wilbur Willard,	Palo Alto,	Civil Eng.
Zimmer, George Francis,	Birdseye, Ind.,	Law
Zimmerman, Fred,	Portland, Ore.,	Economics
Zoffman, George Fred, A. B., Stanford, 1907.	San Jose,	Geol. & Min.
Zschokke, Irma Julia,	Palo Alto,	History

SUMMARIES

Officers

Trustees		15
Faculty		
Professors	36	
Associate Professors	22	
Assistant Professors	37	
Instructors	38	
Assistants	63	
Lecturers	4	200
Other Officers		50

Students

Graduates		
Candidates for Degree of A. M.	12	
Candidates for Degree of Engineer	1	
Candidates for Degree of J. D.	4	
Candidates for Degree of Ph. D.	3	
Not Candidates for Advanced Degrees	66	86
Undergraduates		1485
Special Students		97
Total		1668

BY DEPARTMENTS

Major Subject	Graduate	Undergraduate	Special	Total	No. Students Taking Work	Sum of All Class Lists
					First Semester	First Semester
Greek	....	14	1	15	*205	243
Latin	5	53	....	58	†156	221
Germanic Languages	3	92	....	95	457	640
Romanic Languages	3	19	1	23	416	510
English	8	165	5	178	716	1059
Biblical History	....	....	....	....	12	12
Psychology	2	4	....	6	117	121
Education	7	16	2	25	188	246
History	7	115	6	128	463	695
Economics	2	91	4	97	314	371
Law	17	259	23	299	265	712
Drawing	5	26	1	32	171	218
Mathematics	2	21	2	25	119	136
Applied Mathematics	....	....	....	....	291	503
Physics	1	8	1	10	168	176
Chemistry	5	74	5	84	346	515
Botany	2	24	2	28	127	134
Physiology	4	56	4	64	113	140
Hygiene	....	....	....	....	324	329
Zoology	2	24	3	29	93	124
Entomol. and Bionomics	3	7	2	12	185	192
Geology	6	112	8	126	298	362
Engineering	....	....	....	....	308	431
Civil Engineering	....	133	13	146	78	82
Mechanical Engineering	1	68	4	73	307	409
Electrical Engineering	....	103	12	115	67	91

*Including 136 in classes not requiring a knowledge of Greek.

†Including 13 in classes not requiring a knowledge of Latin.

By Residence

California	1329	Maryland	3
Oregon	51	Vermont	3
Washington	37	Wisconsin	3
Illinois	19	Connecticut	2
New York	17	Massachusetts	2
Utah	16	Michigan	2
Arizona	14	New Jersey	2
Colorado	14	North Dakota	2
Hawaii	13	Rhode Island	2
Indiana	13	South Dakota	2
Montana	13	Texas	2
Iowa	10	New Hampshire	1
Nevada	9	North Carolina	1
Missouri	8	Virginia	1
Idaho	6	Wyoming	1
Nebraska	6	Japan	13
Ohio	6	Mexico	4
Pennsylvania	6	Canada	3
Kansas	5	India	2
Minnesota	5	Bermuda Islands	1
Arkansas	4	China	1
District of Columbia	4	Germany	1
New Mexico	4	Holland	1
Kentucky	3	Portugal	1

California by Counties

Alameda	55	Modoc	1	Santa Clara	459
Amador	3	Monterey	13	Santa Cruz	15
Butte	6	Napa	3	Shasta	4
Colusa	2	Nevada	1	Solano	9
Contra Costa	4	Orange	17	Sonoma	15
Fresno	22	Placer	3	Siskiyou	1
Humboldt	17	Riverside	30	Stanislaus	3
Inyo	2	Sacramento	24	Sutter	5
Kern	8	San Benito	3	Tehama	2
Kings	3	San Bernardino	64	Tulare	20
Lake	1	San Diego	46	Tuolumne	1
Los Angeles	228	San Francisco	108	Ventura	10
Madera	2	San Joaquin	15	Yolo	9
Marin	6	San Luis Obis.	14	Yuba	3
Mendocino	13	San Mateo	33		
Merced	3	Santa Barbara	23		

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